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**National Highway
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TRANSPORTATION SCIENCES CENTER
ACCIDENT RESEARCH GROUP

Division of Calspan SRL Corporation
Buffalo, New York 14225

CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-14
VEHICLE: 1994 OLDSMOBILE NINETY EIGHT REGENCY ELITE
LOCATION: [redacted]
CRASH DATE: [redacted], 1994

Contract No. DTNH22-94-D-07058

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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On-site investigation of an air bag deployment crash that resulted in multiple fractures to the right hand of the right front passenger of a 1994 Oldsmobile Ninety Eight as she attempted to brace against the air bag module cover flap.

16. *Abstract*

This crash investigation focused on the injuries that were sustained by the right front passenger of a 1994 Oldsmobile Ninety Eight. The vehicle was involved in a front-to-rear impact sequence with a stopped 1983 Ford Ranger pickup truck. The front bumper of the Oldsmobile underrode the rear step bumper of the Ranger resulting in 25.1 cm (9.1") of crush to the left corner of the radiator support panel. The Oldsmobile sustained a velocity change of 16 km/h (10 mph) which deployed the supplemental driver and passenger side air bags.

Immediately prior to impact, the 65 year old right front passenger attempted to brace against the upper instrument panel with her right hand. Her finger extended over the leading edge of the passenger side air bag module cover flap. As the SRS deployed, the cover flap impacted the right third through fifth fingers resulting in multiple fractures and lacerations to the volar aspect of the digits. The cover flap subsequently contacted and fractured the windshield, however, the passenger hand did not contact the glazing.

17. *Key Words* On-site investigation Front-to-rear impact configuration Supplemental Restraint System Air bag deployment AIS-2 injury level	18. *Distribution Statement* General Public

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CALSPAN SRL ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-14
VEHICLE: 1994 OLDSMOBILE NINETY EIGHT REGENCY ELITE
LOCATION: [redacted]

SUMMARY

This on-site investigation focused on a front-to-rear chain reaction crash that involved a 1994 Oldsmobile Ninety Eight Regency Elite, 4 door sedan, that was equipped with a dual driver and passenger side air bag Supplemental Restraint System (SRS). The full frontal area of the Oldsmobile impacted and underrode the rear step-bumper of a 1983 Ford Ranger that was stopped in traffic for a signalized intersection. The 12 o'clock/6 o'clock impact configuration resulted in a sufficient longitudinal deceleration to deploy the Oldsmobile's SRS. The 65 year old female right front passenger attempted to brace against the right upper instrument panel with her right hand. Her fingers extended over the leading edge of the top mounted passenger side air bag module cover flap. As the SRS deployed, the module cover door impacted the volar aspect of her hand which resulted in multiple fractures of the right third through fifth digits. The belted driver of the Oldsmobile was not injured.

The crash occurred in [redacted] 1994, during daylight hours on an urban two-lane road approximately 107 m (350') west of a four-leg intersection. The dry asphalt road surface was straight with a hillcrest at the crash site and a posted speed limit of 48 km/h (30 mph). Both edges of the 9.0 m (29'6") wide roadway were bordered by grass shoulders.

The 1994 Oldsmobile Ninety Eight was provided to the 64 year old male driver as a courtesy car for a local sporting event, therefore his familiarity with the vehicle was limited. In addition to the SRS, the Oldsmobile was equipped with four-wheel, power-disc brakes with anti-lock (ABS), power windows and power 60/40 split-bench front seats, passenger side air conditioning controls, leather seats with adjustable head restraints, glass sunroof, and a tilt steering wheel. The four outboard seated positions were equipped with manual 3-point lap and shoulder belts. The manual belts for the front outboard seated positions were equipped with adjustable D-rings. Both D-rings were found adjusted to the full up vertical positions. At the time of Calspan's inspection of the vehicle, the front set tracks were adjusted to the full rearward positions and the head restraints were in the down positions, on top of the seat backs. The vehicle was manufactured on [redacted]/94 and was identified by the following vehicle identification number (VIN): 1G3CW[redacted] At the time of the crash, the vehicle had an odometer reading of 646 km (401 miles).

The Oldsmobile Ninety Eight was traveling in an easterly direction on the two-lane roadway and descended a long grade that ended in a sag area then ascended a positive grade to a hillcrest. Eastbound traffic had reportedly backed-up from the intersection to the downslope of the hillcrest located approximately 107 m (350') west of the intersection. As the Oldsmobile crested the hill, the

driver noted the stopped traffic and braked in an attempt to avoid the impending crash. The Oldsmobile was equipped with ABS, therefore no tire marks were visible on the road surface to determine the level of braking. There were several unrelated skidmarks that began at the hillcrest and terminated east of this crash site.

The front suspension of the Oldsmobile probably compressed due to the pre-crash braking as it impacted the rear of the stopped Ford Ranger. The top surface of the front bumper facia initially impacted then underrode the rear step bumper of the pickup truck. There was abrasive type damage to the top surface of the facia, however, there was no residual crush at bumper level or compression of the bumper energy absorbing devices (EADs). The grille, hood face, and upper radiator support of the Oldsmobile subsequently engaged against the bumper and tailgate of the Ford Ranger. The contact sequence fractured the plastic grille and headlamp assemblies and crushed the radiator support to a maximum depth of 25.1 cm (9.9") located 38.1 cm (15.0") left of center. The Collision Deformation Classifications (CDC) were 12-FDMW-1 and 06-BDEW-1 for the Oldsmobile and the Ford Ranger respectively. The damage algorithm of the CRASHPC program computed velocity changes of 16 km/h (10 mph) for the Oldsmobile and 21 km/h (13 mph) for the Ranger. As a result of the impact induced deployment, the Oldsmobile Ninety Eight's driver and passenger side air bags deployed.

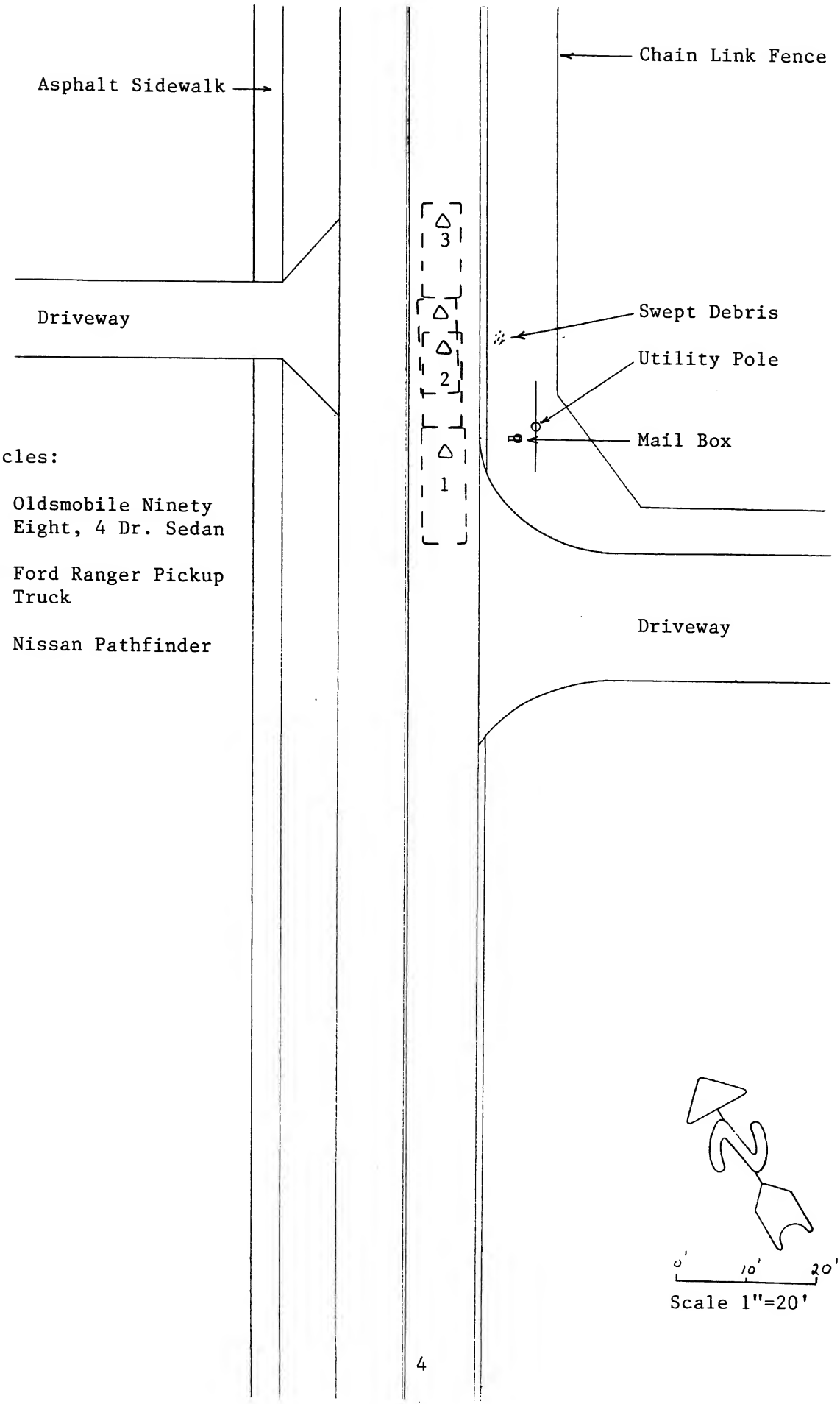
The driver of the Oldsmobile was wearing the manual 3-point lap and shoulder belt system. Belt usage was confirmed by the GM readout of the on board Diagnostic Energy Reserve Module (DERM). There was no distinct evidence of belt loading, however, the latchplate yielded several wear marks which indicated routine usage during the 646 km that were recorded on the odometer. At impact, the driver probably initiated a forward trajectory in response to the 12 o'clock impact force and loaded the manual belt webbing and the deployed driver's side air bag. He did not sustain injury from his involvement with the restraint systems or from the low severity crash forces. There were no visible occupant contact points within the driver's compartment.

The right front occupant of the Oldsmobile 98 was a 65 year old adult female. She was reportedly wearing the manual 3-point lap and shoulder belt system. There was no evidence of loading on the belt webbing, however, the latchplate did yield routine wear marks which indicated previous usage. Immediately prior to the crash, the right front passenger attempted to brace against the vertical surface of the upper right instrument panel with her right hand. The palm of her hand probably braced against the vertical surface of the panel as her fingers extended forward over the leading edge of the top mounted module cover flap for the passenger side air bag. At impact, the SRS deployed and the leading edge of the cover flap impacted her right third through fifth fingers which resulted in comminuted fractures of the distal metacarpals with displacement to the right (AIS-2), comminuted intra-articular fractures of the mid phalanx of the right fifth digit and distal right fourth digit (AIS-1), and open lacerations to the volar aspect of the right fourth and fifth digits (AIS-1). The air bag door continued on an upward trajectory and impacted and fractured the windshield forward of the passenger's position. There was no evidence of passenger hand contact with the windshield or adjacent components. Her right knee possibly contacted, or was contacted by the mid portion of the glove box door which was found in the opened position at the time of our inspection

of the vehicle. The passenger was removed from the vehicle by rescue personnel and transported to a local hospital by ambulance where she was admitted for treatment of the finger fractures. Reports indicated that the passenger required surgery and the placement of numerous pins to repair the multiple fractures. She was discharged the following day and referred to an extensive physical therapy program.

CRASH SCHMATIC

Calspan Case No. 94-14



Vehicles:

#1 - 1994 Oldsmobile Ninety Eight, 4 Dr. Sedan

#2 - 1983 Ford Ranger Pickup Truck

#3 - 1988 Nissan Pathfinder

CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-14
VEHICLE: 1994 OLDSMOBILE NINETY EIGHT REGENCY ELITE
LOCATION: MARYLAND

CRASH DATA

Location:	2-lane road
State:	[redacted]
Area/Type:	Urban/Commercial
Crash Date/Time:	June, 1994, daylight hours
Investigating Police Agency:	County Police
Crash Type:	Three vehicle, front-to-rear impact configuration
Air Bag Vehicle Occupant Injury Severity:	Driver - Not injured Right Front Passenger - (AIS-2)

AMBIENCE

Viewing Conditions:	Daylight
Weather:	Clear
Precipitation:	None
Road Surface:	Dry
Temperature:	24 degrees C (mid 70's degrees F)

HIGHWAY

Type:	State route
Number of Lanes:	2
Width:	9.0 m (29'6")
Surface:	Asphalt

HIGHWAY (CONT'D.)

Median:	None
Edge:	Grass shoulders
Vertical Alignment:	Hillcrest
Horizontal Alignment:	Straight
Estimated Coefficient of Friction:	.70
Traffic Density:	Moderate

TRAFFIC CONTROLS

Signals:	None
Signs:	No pertinent signs
Markings:	Solid double yellow centerline, solid white road edge lines
Posted Speed Limit:	48 km/h (30 mph)

VEHICLES

	Air Bag Vehicle	Vehicle #2
Description:	1994 Oldsmobile Ninety Eight Regency Elite, 4-door sedan	1983 Ford Ranger pickup truck, 4x2, with aluminum cap
V.I.N.:	1G3CW[redacted] (production number deleted)	1FTCR[redacted] (production number deleted)
Date of Manufacture:	4/94	2/83
Color:	Burgundy	Brown/cream
Odometer:	645.5 km (401.1 miles)	150,210 km (93,339 miles)
Engine:	V-6, 3800 cc	V-6, 2.8 liter

VEHICLES (CONT'D.)

Transmission:	4-speed automatic overdrive, column mounted transmission selector lever	
Steering:	Power-assisted	
Brakes:	Power-assisted four-wheel disc with four-wheel anti-lock (ABS)	
Padding:	Upper and mid instrument panel, knee bolster, glove box door, driver and passenger side air bag module cover flaps, sunvisors, soft-edged steering wheel rim, door panels, door armrests, fold-down center armrest, adjustable head restraints	
Manual Restraints:	3-point lap and shoulder belt systems, inertia activated locking retractors with independent belt webbings affixed to a common latchplate, and adjustable D-rings at the front outboard 60/40 split-bench front seated positions, center front lap belt, 3-point lap and shoulder belts in the outboard rear seat positions, center rear lap belt	
Automatic Restraints:	Driver and passenger side air bag Supplemental Restraint System (SRS) which deployed as a result of the crash	
Tow Status:	Towed due to vehicle damage	Towed due to vehicle damage

Vehicle #3

Description:	1988 Nissan Pathfinder, sport utility vehicle	
V.I.N.:	JN8HD[redacted]	

VEHICLE DAMAGE

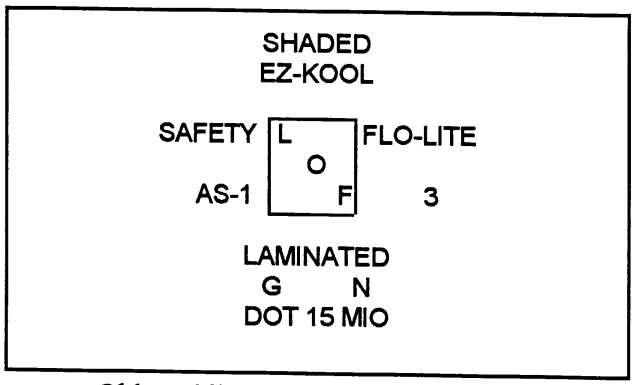
Air Bag Vehicle

Exterior:

The 1994 Oldsmobile Ninety Eight sustained moderate frontal damage as a result of its front-to-rear impact sequence with the stopped Ford Ranger (vehicle #2). In an attempt to avoid the crash, the driver of the Oldsmobile applied a braking force which compressed the front suspension as the vehicle impacted the rear of the stopped Ford Ranger. The top surface of the front bumper fascia initially impacted then underrode the rear step bumper of the pickup truck. Damage to the fascia consisted of longitudinally oriented abrasions to top surface and a tear located 7.6 cm (3.0") left of the center that resulted from the trailer hitch stud protruding from the center of the rear bumper of the Ford Ranger. The center-mounted license plate frame was cracked as a result of the contact sequence. There was compression of the bumper energy absorbing devices (EADs) and no residual crush at bumper level. Both front bumper EADs remained in their original pre-crash position at 8.6 cm (3.375") in length (refer to Photograph Nos. 15 and 16). As the front bumper of the Oldsmobile underrode the rear bumper of the Ford Ranger, the grille and hood face area engaged against the bumper face and tailgate of the Ford Ranger. The direct contact damage was 140.0 cm (55.1") in length which extended across the entire width of the vehicle at grille level. The contact fractured the plastic grille and headlamp assemblies and deformed the air conditioning condenser, the center mounted air bag discriminating sensor, and the upper radiator support panel. Maximum crush was 25.1 cm (9.875") located at the radiator support panel 38.1 cm (15.0") left of center (refer to Photograph Nos. 13 and 14). The residual crush profile was documented at the upper radiator support level and was as follows: C_1= 9.1 cm (3.6"), C_2=24.4 cm (9.6"), C_3=19.7 cm (7.75"), C_4=16.8 cm (6.6"), C_5=14.2 cm (5.6"), C_6=2.3 cm (0.9"). The leading edge of the hood sustained contact damage from engagement with the tailgate of the struck Ford Ranger. The contact damage began 12.1 cm (4.75") inboard of the right corner and extended 134.6 cm (53.0") to the left corner (refer to Photograph No. 7). The tempered glass sunroof separated from the vehicle and was found lying undamaged in the rear seat area of the vehicle. The roof sustained symmetrical areas of deformation directly rearward of the B-pillars on both sides of the vehicle (refer to Photograph Nos. 21 and 26).

VEHICLE DAMAGE (CONT'D.)

Interior (Air Bag Vehicle): There was no interior intrusion or damage associated with exterior deformation. Interior damage resulted from deployment of the Supplemental Restraint System and occupant contact points on the passenger side of the vehicle. During the deployment of the SRS, the passenger side air bag module cover flap impacted and fractured the laminated windshield. The leading edge of the module cover flap contacted the windshield 47.6 cm (18.75") below the header and bowed the laminated glazing approximately 2.5 cm (1.0") outward. The horizontally oriented impact point was located 17.8-55.9 cm (7.0-22.0"). The windshield identification watermark was as follows:



Oldsmobile Windshield Watermark

As a result of windshield contact, the module cover flap was abraded over the leading edge and front third area of the flap. In addition to the abrasions, the right third area of the flap was deformed in a downward direction 1.3 cm (0.5"), probably due to the contact with the curvature of the windshield. The expanding passenger side air bag probably contacted the interior rear view mirror and displaced the right side of the mirror in an upward direction. The trim panel at the trailing edge of the instrument panel adjacent to the windshield was displaced forward and upward from deployment of the passenger air bag module cover flap (refer to Photograph No. 41). The upper surface of the passenger side air bag exhibited burgundy vinyl transfer marks which resulted from expansion of the bag against the internal surface of the module cover flap. Within the vehicle were numerous white powder transfers that were associated with the deployment. A small white powder transfer was located on the vinyl trim panel at the apex of the B-pillar and the roof side rail. The same substance was also noted on the leading edge of the stowed right sunvisor at 43.8-47.0 cm (17.25-18.5") right of the vehicle's centerline. The visor also had a depression located 41.9-46.4 cm (16.5- 18.25") right of center

VEHICLE DAMAGE (CONT'D.)

which probably resulted from contact by the volar aspect of the passenger's right hand. A vertically oriented 3.8 cm (1.5") white powder-type scuff was located on the apex of the right mid A-pillar. Another white powder-type mark was located on the leading edge of the passenger roof assist grip (refer to Photograph No. 51). A white powder transfer mark was noted on the headliner adjacent to the B-pillar 10.8-13.3 cm (4.25-5.25") inboard of the side rail (refer to Photograph No. 52). The lower surface of the passenger side air bag exhibited several 1.9 cm (0.75") body fluid (blood) stains which probably occurred post-event as the passenger remained in the vehicle and the bag deflated. The glove box door was found fully open and would not latch, although it was not deformed. A possible knee scuff was located on the glove box door 19.7-22.5 cm (7.75-8.875") right of the left edge and 12.7-14.6 cm (5.0-5.75") below from the mid panel/upper panel juncture (refer to Photograph No. 46). The vinyl fabric at the top edge of the glove box door was gouged 24.1-24.4 cm (9.5-9.625") right of the left edge (refer to Photograph No. 47). Body fluid was present around gouge.

Vehicle #2

Exterior:

The 1983 Ford Ranger sustained full-width direct contact damage of 153.0 cm (60.25") to the lower portion of the rear bumper. The rear bumper was an original equipment manufacture (OEM) type step bumper with a ball hitch bolted to the mid point. Maximum crush was 7.3 cm (2.9") located on the lower right corner area. The crush profile was as follows: C_1=5.1 cm (2.0"), C_2=2.8 cm (1.1"), C_3=1.5 cm (0.6"), C_4=1.9 cm (0.75"), C_5=5.1 cm (2.0"), C_6=7.3 cm (2.9"). The vehicle damage profile is documented in Photograph Nos. 55- 58. The hood of the Oldsmobile engaged against the lower tailgate of the Ford Ranger, however, there was no contact damage to the tailgate. Paint transfers were noted to the hood face of the Oldsmobile from tailgate contact. Minor right frontal damage resulted to the Ford Ranger from its subsequent impact sequence with the stopped Nissan Pathfinder (vehicle #3). The damage consisted of bumper deformation at the right corner, right headlight and grille damage, and right front fender crush.

Vehicle #3

Exterior:

Unavailable

AUTOMATIC RESTRAINT SYSTEM

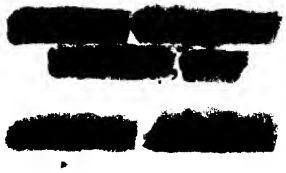
The 1994 Oldsmobile was equipped with a Supplemental Restraint System (SRS) that consisted of dual driver and passenger side air bags which deployed as a result of the crash with the Ford Ranger. In addition to the air bags, the SRS utilized three front mounted discriminating (crash) sensors, a passenger compartment mounted diagnostic energy reserve module (DERM), and an arming (safing) sensor. The driver side air bag was incorporated into the steering wheel hub assembly in a typical configuration while the passenger side air bag was mounted into the upper right instrument panel in a top-mount configuration.

The two outboard discriminating sensors were mounted to the frame rails directly rearward of the bumper EADs (refer to Photograph Nos. 17 and 19). The third discriminating sensor was mounted to the forward side of the radiator support panel, adjacent to the left side of the hood latch assembly. The forward aspect of the center mounted sensor was slightly deformed as a result of the frontal impact (refer to Photograph No. 18), however, the deformation did not appear to have damaged the internal components of the sensor.

The driver's side air bag deployed as designed from an I-configuration air bag module cover assembly that was contained within the offset four-spoke steering wheel. The four spokes were located at the 9 and 3 o'clock and 4 and 8 o'clock positions. The left side of the steering wheel hub, adjacent to the hinge point of the module cover flaps, contained fan and temperature control switches between the spokes while the right side of the wheel contained the volume and the seek/program switches for the stereo system (refer to Photograph No. 34). The I-configuration module cover flaps were hinged at the sides with a vertical center tear seam and horizontal perimeter seams. The symmetrical cover flaps had a upper width (horizontal measurement) of 8.2 cm (3.25") and a lower width of 6.9 cm (2.75"). The vertical tear seam was 12.2 cm (4.875") in length. The horn was activated by depressing any area of the module cover flaps. This was accomplished by contact pads located between the module cover flaps and the internal nylon flaps which protected the folded air bag (refer to Photograph No. 35). The interior surface of the flaps were molded in a honeycomb-type configuration. The deployed driver's side air bag was 64.8 cm (25.5") in diameter and was and was constructed of a typical woven nylon-type fabric. The bag was not tethered and was vented with two 2.5 cm (1.0") diameter ports located on the back side of the bag at the 3 and 9 o'clock positions. There was no damage or evidence of occupant contact to the deployed driver' side air bag. During our inspection of the vehicle, the tilt steering wheel was adjusted two positions above the mid (center) point.

The passenger side air bag module assembly was mounted into the upper right instrument panel in a top mount configuration. The module cover flap opened at the designated tear points at the leading edge (edge toward occupant) and side surfaces. The cover flap was rigidly hinged at the horizontal edge adjacent to the windshield which allowed the cover flap to open in an upward and forward direction (with respect to the vehicle). The vinyl cover flap measured 38.7 cm (15.25") in width, 19.1 cm (7.5") in depth, and was approximately 1.3 cm (0.5") in thickness. A bar coded tag on the inside of the passenger side cover flap identified the manufacturer as follows:

AUTOMATIC RESTRAINT SYSTEM (CONT'D.)



The rigid cover flap impacted and fractured the laminated windshield during deployment. The cover flap sustained 1.3 cm (0.5") of downward deflection at the right third sector that was due to contact with the contoured windshield. A thin sheet of Tyvek-like material was manufactured into the module assembly and was positioned between the interior surface of the module and cover flap which acted as a protective liner for the folded air bag (refer to Photograph No. 42). A bar coded label was affixed to the right side of the passenger side air bag module assembly which identified the unit with the following alpha-numeric sequence:

The passenger side air bag was constructed of a typical woven nylon-type fabric. The bag was not lined and was tethered by two internal tether panels that were affixed to the face of the bag with two rows of orange stitching on 29.8 cm (11.75") centers. The internal tether panels limited the rearward excursion of the bag. The width of the passenger side bag was 67.9 cm (26.75") from seam-to-seam. The bag was vented by two 5.1 cm (2.0") diameter ports located on the side panels at the 3 and 9 o'clock positions. Burgundy vinyl transfers were present on the top side of the air bag probably due to contact with the module cover flap. Body fluid (blood) stains that were 1.9 cm (.75") in diameter were present on the bottom surface of the air bag. There was no evidence of occupant contact to the deployed passenger side air bag or module cover flap.

The SRS diagnostic energy reserve module (DERM) monitors and records sensor data, faults within the system, ignition cycles, and the manual seat belt warning lamp which is activated by the driver's side belt system. During our inspection of the vehicle, representatives from General Motors were available to perform a read-out of the DERM. The results of the DERM were as follows:

- The discriminating sensor closed 3.4 milliseconds prior to the lower threshold arming sensor. Both sensors remained closed in an overlap mode for 7.78 milliseconds which resulted in a total closure of 11.2 milliseconds for the discriminating sensor. (In a typical barrier crash, the arming sensor usually closes prior to the discriminating sensor.)

- The DERM readout hexadecimal code indicated that the driver's manual belt system was buckled during the SRS deployment phase. This was recorded through an off-mode of the instrument panel mounted seat belt indicator lamp. If the belt was not worn, the lamp would have been in the on-position.

- The DERM recorded 120 ignition cycles with no faults stored in the system, therefore the SRS deployment was a normal crash induced deployment.

AUTOMATIC RESTRAINT SYSTEM (CONT'D.)

In addition to the DERM readout, the General Motors representative indicated that the passenger side air bag module cover flap typically does not impact the windshield as it did in this crash related deployment. He noted that when ambient temperatures exceed 21 degrees C (70 degrees F), the gas generators have a tendency to produce more gas, therefore resulting in a more aggressive deployment. This aggressive deployment probably resulted in cover flap contact with the windshield. At the time of the crash, the ambient temperature was approximately 24 degrees C (mid 70's degrees F). The Oldsmobile was apparently parked for an unknown period of time prior to the crash which probably resulted in an interior temperature which exceeded the ambient temperature.

MANUAL RESTRAINTS

The Oldsmobile was equipped with manual 3-point lap and shoulder belts in the front outboard seated positions. The belt systems consisted of separate lap and shoulder belt webbings that were attached to a common latchplate. Inertia activated locking retractors were mounted in the B-pillars for the shoulder belt webbings and in the sills of the vehicle for the lap belts. The B-pillar mounted upper anchorages (D-rings) were adjustable for the shoulder belt webbings. Both left front and right front D-rings were in the full-up at the time of vehicle inspection. The left front belt latchplate yielded several faint routine wear marks. No visible wear marks were observed on the right front latchplate. There was no evidence of loading on the manual belt systems for the driver and right front passenger seated positions.

The rear seat of the Oldsmobile was equipped with 3-point lap and shoulder belts in the outboard seated positions and a center lap belt. There were no rear seated occupants in the Oldsmobile at the time of the crash.

COLLISION SEQUENCE

Pre-Crash:

The 1994 Oldsmobile Ninety Eight was a courtesy car for a local sporting event and not the personal car of the driver, therefore his familiarity with the vehicle was limited. Prior to the crash, the vehicle had been parked for some time that day before being driven. Ambient temperatures were in the 24 degree C (mid 70's degree F) range with interior temperatures of a closed vehicle probably exceeding these values.

Immediately prior to the crash, the Oldsmobile was traveling in an easterly direction on a dry asphalt road surface at an estimated speed of 48 km/h (30 mph). On its pre-crash approach, the vehicle descended a long grade that ended in a sag area then ascended a positive grade to a hillcrest. Eastbound traffic had reportedly backed-up from a four-leg intersection to the down slope of the hillcrest that was located approximately 107 m (350') west of the intersection. Traffic flow through the intersection was controlled by a traffic signal. As the

COLLISION SEQUENCE (CONT'D.)

Pre-Crash (Cont'd.):

Oldsmobile crested the hill, a 1983 Ford Ranger which was traveling ahead of the air bag equipped vehicle, braked rapidly to avoid the stopped traffic. A Nissan Pathfinder was stopped in traffic ahead of the Ford Ranger. The driver of the Oldsmobile attempted to avoid the impending impact with the Ford Ranger by braking. The Oldsmobile was equipped with ABS, therefore no tire marks were visible on the road surface to determine the level of braking.

Crash:

The full frontal area of the Oldsmobile Ninety Eight impacted the rear of the Ford Ranger resulting in a 12 o'clock/6 o'clock impact configuration. The front suspension of the Oldsmobile compressed due to the pre-crash braking as it impacted the rear of the stopped Ford Ranger pickup truck. As a result, the top surface of the front bumper fascia of the Oldsmobile initially impacted then underrode the rear step bumper of the pickup truck. The Oldsmobile sustained abrasive type damage to the top surface of the fascia with no compression of the bumper EADs or residual crush at bumper level. The grille and hood face of the Oldsmobile subsequently engaged against the face of the truck's step bumper and tailgate which crushed the grille, headlamps, and the upper radiator support panel. Maximum residual crush at the radiator support bracket was 25.1 cm (9.875") located 38.1 cm (15.0") left of center. The Ford Ranger sustained minor damage across the full width of the rear bumper with a maximum deformation depth of 7.3 cm (2.875") on the lower right side. As a result of the underride front-to-rear impact configuration, the Oldsmobile sustained a longitudinal velocity change of (16 km/h) 10 mph) while the Ford pickup truck sustained an equivalent velocity change of 21 km/h (13 mph). The velocity changes were computed by the damage algorithm of the CRASHPC program. As a result of the impact induced deceleration, the Oldsmobile's SRS deployed.

The impact displaced the Ford Ranger pickup truck in a forward direction where it impact the stopped 1988 Nissan Pathfinder (vehicle #3). The subsequent impact sequence resulted in impact forces of 12 o'clock and 6 o'clock for the Ford and Nissan respectively. Frontal damage to the Ford Ranger consisted of deformation to the right side bumper, headlamp, grille, and right front fender. The rear of the Nissan Pathfinder sustained minor damage.

Post-Crash:

The Oldsmobile Ninety Eight came to rest on the asphalt road surface at or near the point of impact. The Ford Ranger and Nissan Pathfinder came to rest near their subsequent impact location. The Oldsmobile sustained disabling damage which required towing from the scene. The Ford Ranger sustained minor damage to both end planes and was towed from the scene. The Nissan Pathfinder sustained minor rear damage and was driven from the scene.

The driver of the Oldsmobile was not injured and exited the vehicle unassisted. His right front passenger sustained multiple fractures of the right hand and remained in the vehicle for rescue

COLLISION SEQUENCE (CONT'D.)

Post-Crash (Cont'd.):

personnel to arrive on-scene. She was subsequently transported by ambulance to a local hospital where she was admitted for treatment of her fractures.

HUMAN DEMOGRAPHICS/OCCUPANT DATA

Air Bag Vehicle

Driver:	64 year old male
Height:	Unknown
Weight:	Unknown
Manual Restraint Usage:	3-point lap and shoulder belt system
Usage Source:	Police accident report, confirmed by GM readout of on board Diagnostic Energy Reserve Module (DERM)
Eyeware:	Unknown
Vehicle Familiarity:	Unknown
Route Familiarity:	Unknown
Trip Plan:	Unknown
Mode of Transport From Scene:	Rode in ambulance with right front passenger (wife)
Type of Medical Treatment:	None

DRIVER INJURIES Not injured

DRIVER KINEMATICS

The driver of the 1994 Oldsmobile was presumably in a normal posture at impact. His power seat was adjusted to the full rearward track position with the seat back slightly reclined. The adjustable head restraint was positioned at its lowest point, on top of the seat back support. He was properly restrained by the manual 3-point lap and shoulder belt system. There was no direct evidence of driver loading on the belt system, however, the latchplate contained several faint routine wear marks. The diagnostic readout of the DERM by GM confirmed belt usage.

At impact with the Ford Ranger pickup truck, the supplemental driver and passenger side air bag system deployed. The driver initiated a forward trajectory in response to the 12 o'clock impact force and loaded the manual belt webbing and the deployed air bag which prevented him from contact with interior components. As a result of restraint loading, the driver was not injured. There was no evidence of occupant contact on the deployed driver's side air bag.

RIGHT FRONT PASSENGER

Age/Sex:	65 year old female
Height:	175.3 cm (69.0")
Weight:	Unknown
Manual Restraint Usage:	Reportedly wearing manual 3-point lap and shoulder belt system
Usage Source:	Police accident report
Automatic Restraints:	Deployment of the passenger side top-mounted air bag
Mode of Transport From Scene:	Ambulance
Type of Medical Treatment:	Transported to a local hospital, admitted for treatment of finger fractures which required surgery. She was discharged the following day and referred to an extensive physical therapy program.

RIGHT FRONT PASSENGER INJURIES

Injury	Injury Severity (AIS-2)	Injury Mechanism
Comminuted fractures of the distal right third, fourth and fifth metacarpals with displacement to the right	Moderate (752002.22)	Deploying passenger side air bag module cover flap
Comminuted intra-articular fractures of the middle phalanx of the right fifth digit	Minor (752404.11)	Deploying passenger side air bag module cover flap
Comminuted intra-articular fracture of the distal phalanx of the right fourth (ring) digit	Minor (752404.11)	Deploying passenger side air bag module cover flap
Open wounds (lacerations) of the volar aspect (palm side) of the right fourth and fifth digits	Minor (790602.11)	Deploying passenger side air bag module cover flap

RIGHT FRONT PASSENGER KINEMATICS

The right front passenger of the 1994 Oldsmobile Ninety Eight was in a normal seated position at impact. Her seat track was found in the full rearward position, however, it was unknown if this was the position of the seat at the time of the crash. Based on the location

RIGHT FRONT PASSENGER KINEMATICS (CONT'D.)

and severity of her injuries, the right front passenger attempted to brace against the right upper instrument panel with her right hand. The palm of her hand probably rested against the vertical surface of the panel as her fingers extended forward over the top mounted cover flap for the passenger side air bag. She was properly restrained by the manual 3-point lap and shoulder belt system. There was no direct evidence of passenger loading on the belt webbing, however, the latchplate did yield routine wear marks which indicated usage. The adjustable head restraint was positioned in the down mode on top of the seat back.

At impact with the Ford Ranger pickup truck, the supplemental driver and passenger side air bag system deployed. The leading edge of the passenger side air bag module cover flap impacted her right third through fifth fingers which resulted in comminuted fractures of the distal right third, fourth, and fifth metacarpals with displacement to the right, comminuted intra-articular fractures of the middle phalanx of the right fifth digit and distal phalanx of the fourth digit, and open lacerations of the volar aspect of the right fourth and fifth digits. There was no evidence of passenger hand to the instrument panel or module cover flap. The cover flap contact in combination with the deploying air bag, displaced her hand in an upward and rearward direction. It should be noted that there was no hand contact with the windshield which was fractured by the cover flap. Numerous whitish -type transfers were noted to the headliner and side rail trim within the vehicle. Although none of these transfers appeared to be tissue, the transfers were probably residue that resulted from deployment of the SRS.

As a result of the deployment of the passenger side air bag, the glove box door opened and probably impacted the passenger's knee and or leg. A scuff with a small diameter gouge was noted to the top edge of the door with a body fluid stain (blood) adjacent to the gouge. There were no injuries reported to the lower extremities of the passenger, therefore the blood stain on the glove box door probably occurred from the hand post-crash. She came to rest in an upright posture in the passenger seat.

The passenger was removed from the vehicle by rescue personnel and transported to a local hospital by ambulance where she was admitted for treatment of the fractures. She was discharged the following day and referred to an extensive physical therapy program.

ATTACHMENT A

Selected Color Prints
Calspan Case No. 94-14

1. Lookback view of the Oldsmobile's initial approach to the crash scene.

2. Eastbound trajectory of the Oldsmobile 98.

3. Hillcrest in the area of impact.

4. Approximate area of impact (unrelated skidmarks at scene).

5. Probable debris at scene.

6. Frontal damage to the Oldsmobile 98.

7. Direct contact damage across top surface of bumper fascia and hood.

8. Damage across grille and upper radiator support.

9. Close-up view of the face of the left front bumper fascia.

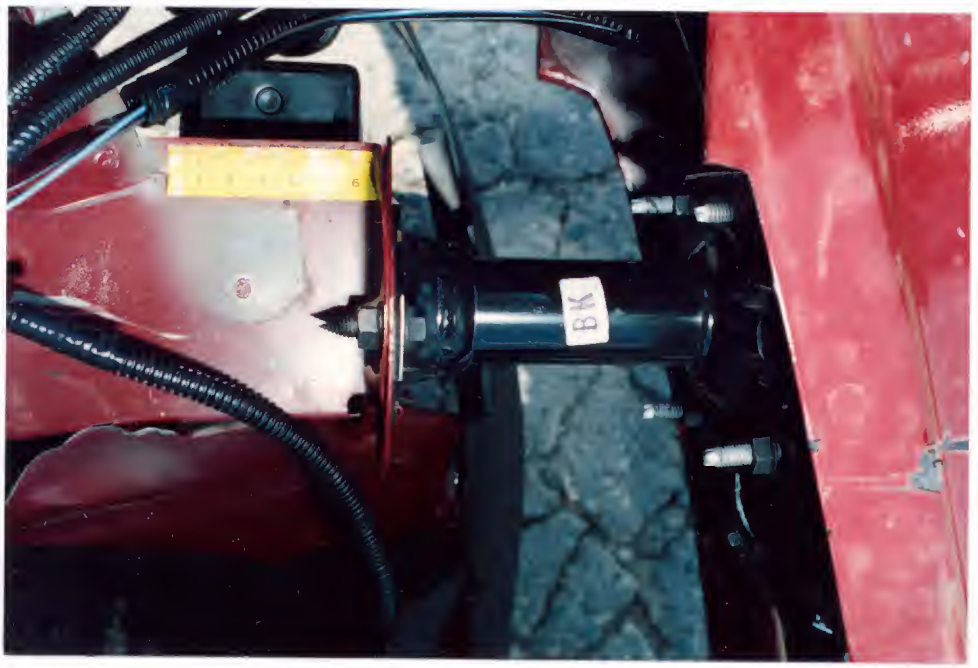
10. Close-up view of the face of the right front bumper fascia.

11. Left front three-quarter view of the Oldsmobile 98.

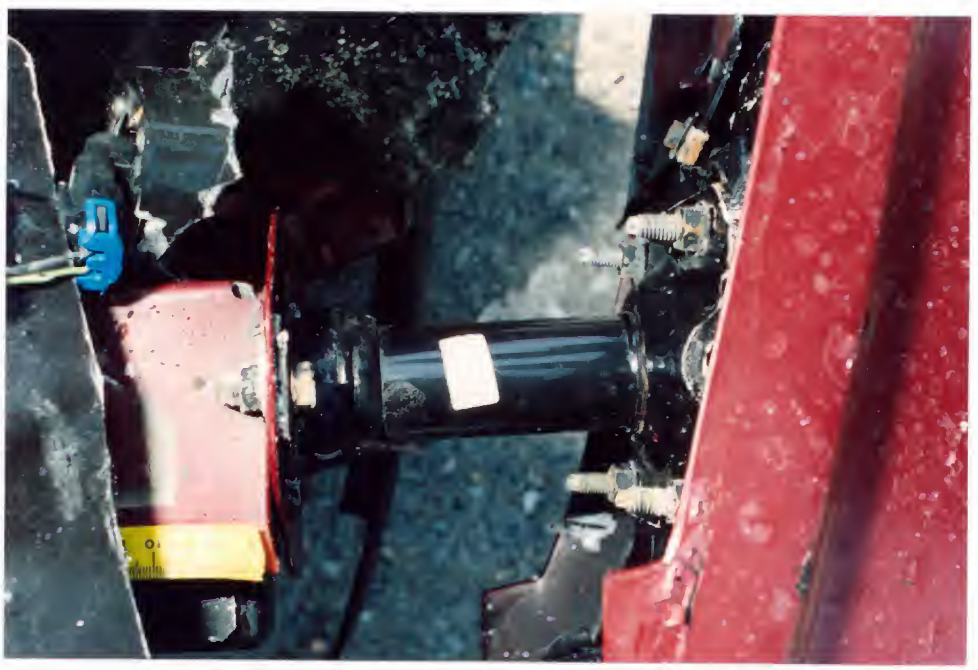
12. Perpendicular view of the hood displacement.

13. Perpendicular view of the crush to the upper radiator support.

14. Perpendicular view of the engine compartment.

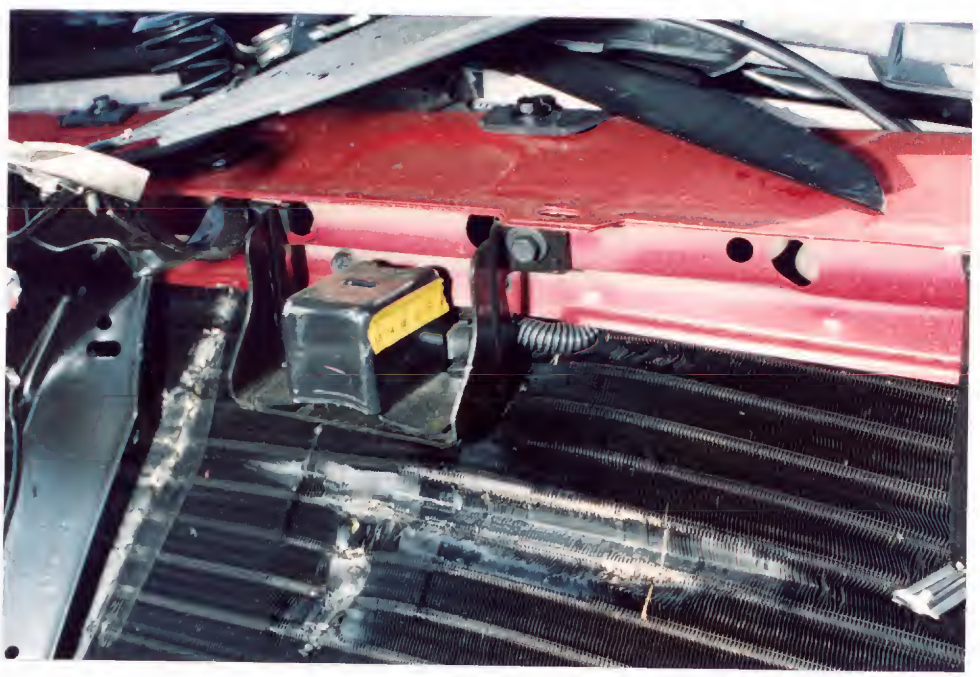


15. Left front bumper energy absorbing device (EAD).

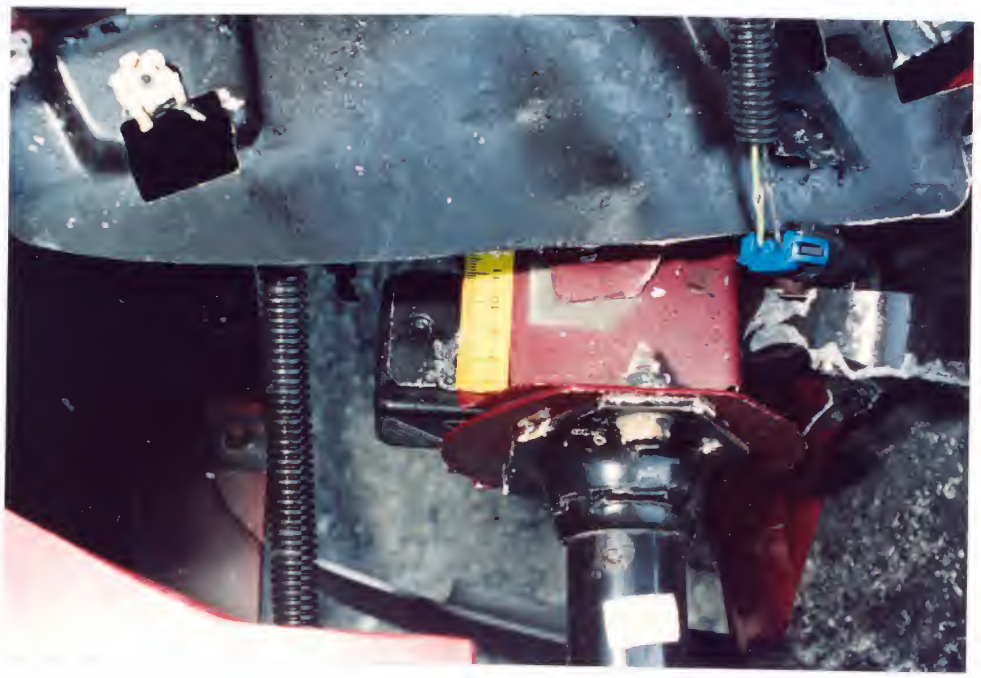


16. Right front bumper EAD (no compression).

17. Left front discriminating (crash) sensor.



18. Contact damage to the leading edge of the center front discriminating sensor.



19. Right front discriminating sensor.

20. Left side view of the Oldsmobile.

21. Induced deformation to roof at the left B-pillar.

22. Left rear view of the Oldsmobile.

23. Right rear three-quarter view.

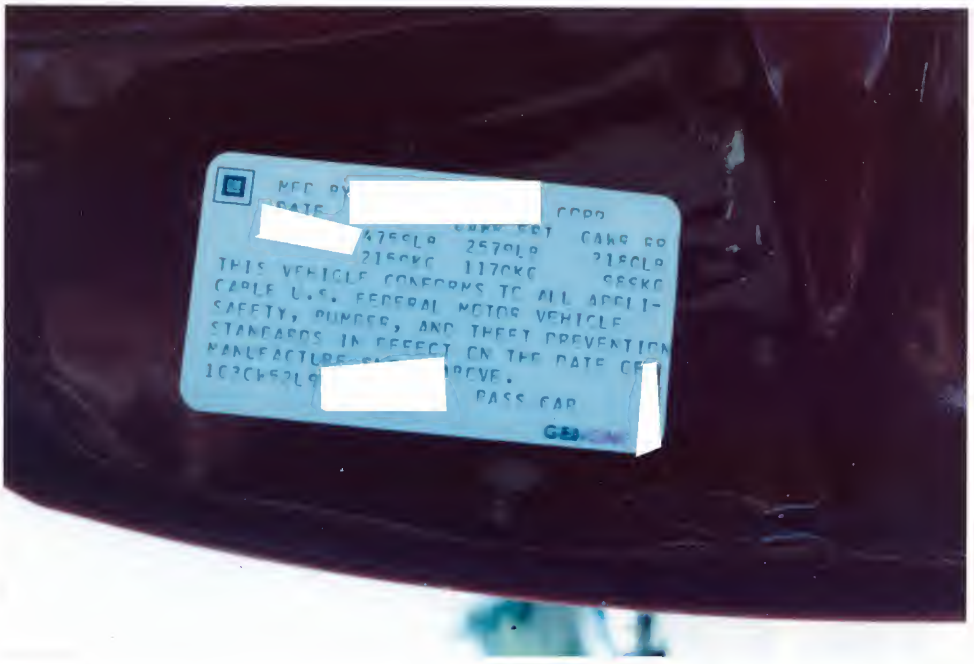
24. Right side view.

25. Tempered glass sun roof separated from the vehicle.

26. Induced deformation to the roof at the right B-pillar area.

25. Tempered glass sun roof separated from the vehicle.

26. Induced deformation to the roof at the right B-pillar area.



29. Vehicle identification label on the left front door.

30. Overall view of the driver's compartment and steering assembly.

31. Knee bolster with probable foot scuff on left side.

32. Driver's side air bag.

33. Driver's seat and the manual 3-point belt system.

34. Vertical configuration of the driver's side air bag module cover flaps.

35. Horn contact pad located between module cover flap and air bag.

36. Close-up view of the driver's side air bag.

37. Perpendicular view across the interior to the right door area.

38. Overall view of the right front passenger compartment and deployed air bag.

39. Deployed passenger side air bag.

40. Passenger side air bag module cover flap.

41. Leading edge of the module cover flap.

42. Module flap and resultant windshield contact damage.

43. Exterior view of the windshield damage.

44. Perpendicular view showing the outward displacement of the windshield.

45. Outboard vent port of the passenger side air bag.

46. Possible knee scuff to the glove box door.

47. Gouge to the top edge of the glove box door.

48. Passenger's seat and the manual 3-point belt system.

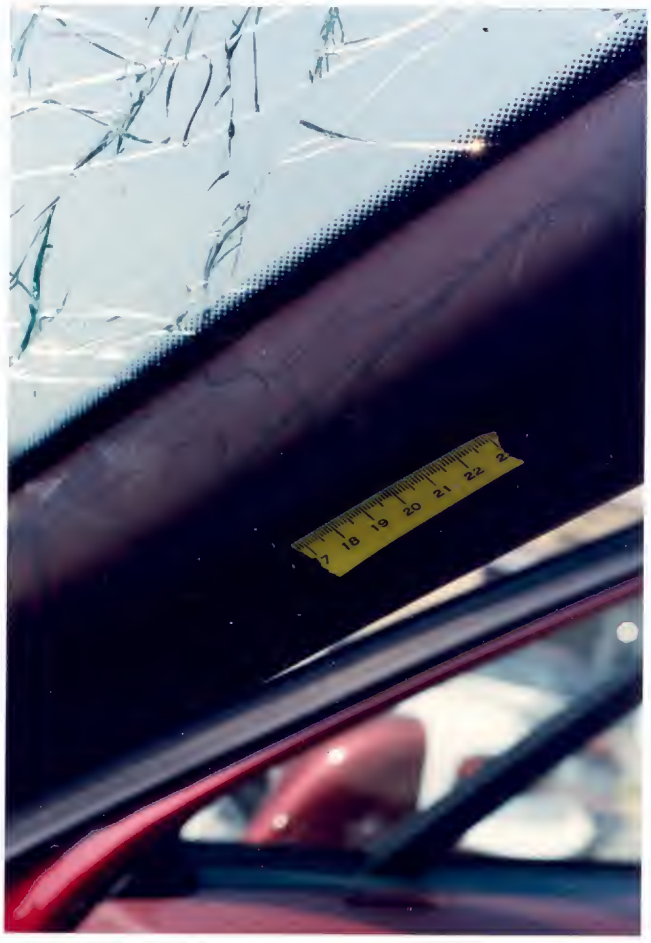
49. White powder transfer on the leading edge of the right sun visor.

50. White powder transfer at the apex of the right B-pillar/side rail juncture.

51. Scuff on the leading edge of the roof mounted right passenger assist grip.

52. White powder transfer on the headliner inboard of the right B-pillar.

53. Scuff at the mid point of the right B-pillar.



54. Left frontal view of the struck Ford Ranger.

55. Left rear three-quarter view of the Ford Ranger.

56. Perpendicular view of bumper crush at the left rear corner.

57. Rear view of the distributed direct contact damage.

58. Perpendicular view of the right rear corner showing the extent of crush.

59. Right rear three-quarter view.

60. Subsequent frontal damage that resulted from contact with vehicle #3.

ATTACHMENT B

CRASHPC Output
(Damage Algorithm)

SUMMARY OF CRASHPC RESULTS USING DAMAGE

CRASH3 RECONSTRUCTION

	SPEED CHANGE (DAMAGE)
VEHICLE #1	
TOTAL	16 KPH (10 MPH)
LONGITUDINAL	-16 KPH (-10 MPH)
LATITUDINAL	0 KPH (0 MPH)
PDOF ANGLE	0 DEGREES
ENERGY DISSIPATED =	19916 JOULES (14687 FT-LB)
VEHICLE #2	
TOTAL	21 KPH (13 MPH)
LONGITUDINAL	21 KPH (13 MPH)
LATITUDINAL	0 KPH (0 MPH)
PDOF ANGLE	-180 DEGREES
ENERGY DISSIPATED =	19600 JOULES (14454 FT-LB)

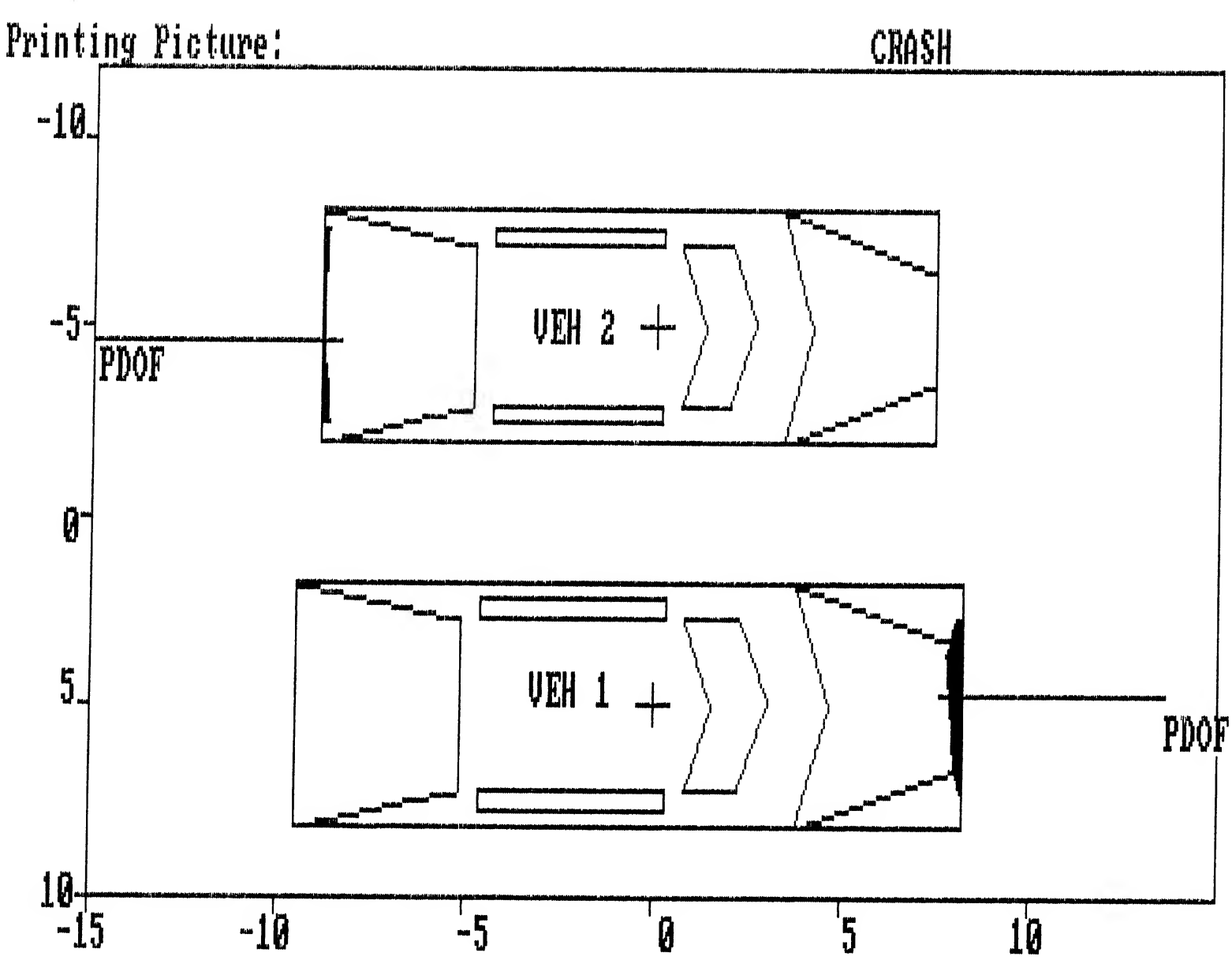
DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	4	3
STIFFNESS CATEGORY	4	8
VEHICLE WEIGHT	1745 KGS (3847 LBS)	1290 KGS (2843 LBS)
CDC	12FDMW1	06BDLW1
PDOF ANGLE	0 DEGREES	180 DEGREES
CRUSH LENGTH	140 CM. (55 IN.)	153 CM. (60 IN.)
C1	5 CM. (2 IN.)	5 CM. (2 IN.)
C2	12 CM. (5 IN.)	3 CM. (1 IN.)
C3	10 CM. (4 IN.)	2 CM. (1 IN.)
C4	8 CM. (3 IN.)	2 CM. (1 IN.)
C5	7 CM. (3 IN.)	5 CM. (2 IN.)
C6	1 CM. (1 IN.)	7 CM. (3 IN.)
D	0 CM. (0 IN.)	0 CM. (0 IN.)
D'	-8 CM. (-3 IN.)	11 CM. (4 IN.)

(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	139 CM. (55 IN.)	130 CM. (51 IN.)
CG TO REAR AXLE	150 CM. (59 IN.)	141 CM. (56 IN.)
TRACK	157 CM. (62 IN.)	150 CM. (59 IN.)
CG TO FRONT OF VEH	251 CM. (99 IN.)	228 CM. (90 IN.)
CG TO REAR OF VEH	-290 CM. (-114 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	98 CM. (39 IN.)	92 CM. (36 IN.)
MOMENT OF INERTIA	16974 KGS (37420 LBS)	11146 KGS (24571 LBS)
VEHICLE MASS	5 KGS (10 LBS)	3 KGS (7 LBS)



ATTACHMENT B

CRASHPC Output
(Damage Algorithm)

SUMMARY OF CRASHPC RESULTS USING DAMAGE

CRASH3 RECONSTRUCTION

	SPEED CHANGE (DAMAGE)
VEHICLE #1	
TOTAL	16 KPH (10 MPH)
LONGITUDINAL	-16 KPH (-10 MPH)
LATITUDINAL	0 KPH (0 MPH)
PDOF ANGLE	0 DEGREES
ENERGY DISSIPATED =	19916 JOULES (14687 FT-LB)
VEHICLE #2	
TOTAL	21 KPH (13 MPH)
LONGITUDINAL	21 KPH (13 MPH)
LATITUDINAL	0 KPH (0 MPH)
PDOF ANGLE	-180 DEGREES
ENERGY DISSIPATED =	19600 JOULES (14454 FT-LB)

DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	4	3
STIFFNESS CATEGORY	4	8
VEHICLE WEIGHT	1745 KGS (3847 LBS)	1290 KGS (2843 LBS)
CDC	12FDMW1	06BDLW1
PDOF ANGLE	0 DEGREES	180 DEGREES
CRUSH LENGTH	140 CM. (55 IN.)	153 CM. (60 IN.)
C1	5 CM. (2 IN.)	5 CM. (2 IN.)
C2	12 CM. (5 IN.)	3 CM. (1 IN.)
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C4	8 CM. (3 IN.)	2 CM. (1 IN.)
C5	7 CM. (3 IN.)	5 CM. (2 IN.)
C6	1 CM. (1 IN.)	7 CM. (3 IN.)
D	0 CM. (0 IN.)	0 CM. (0 IN.)
D'	-8 CM. (-3 IN.)	11 CM. (4 IN.)

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DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
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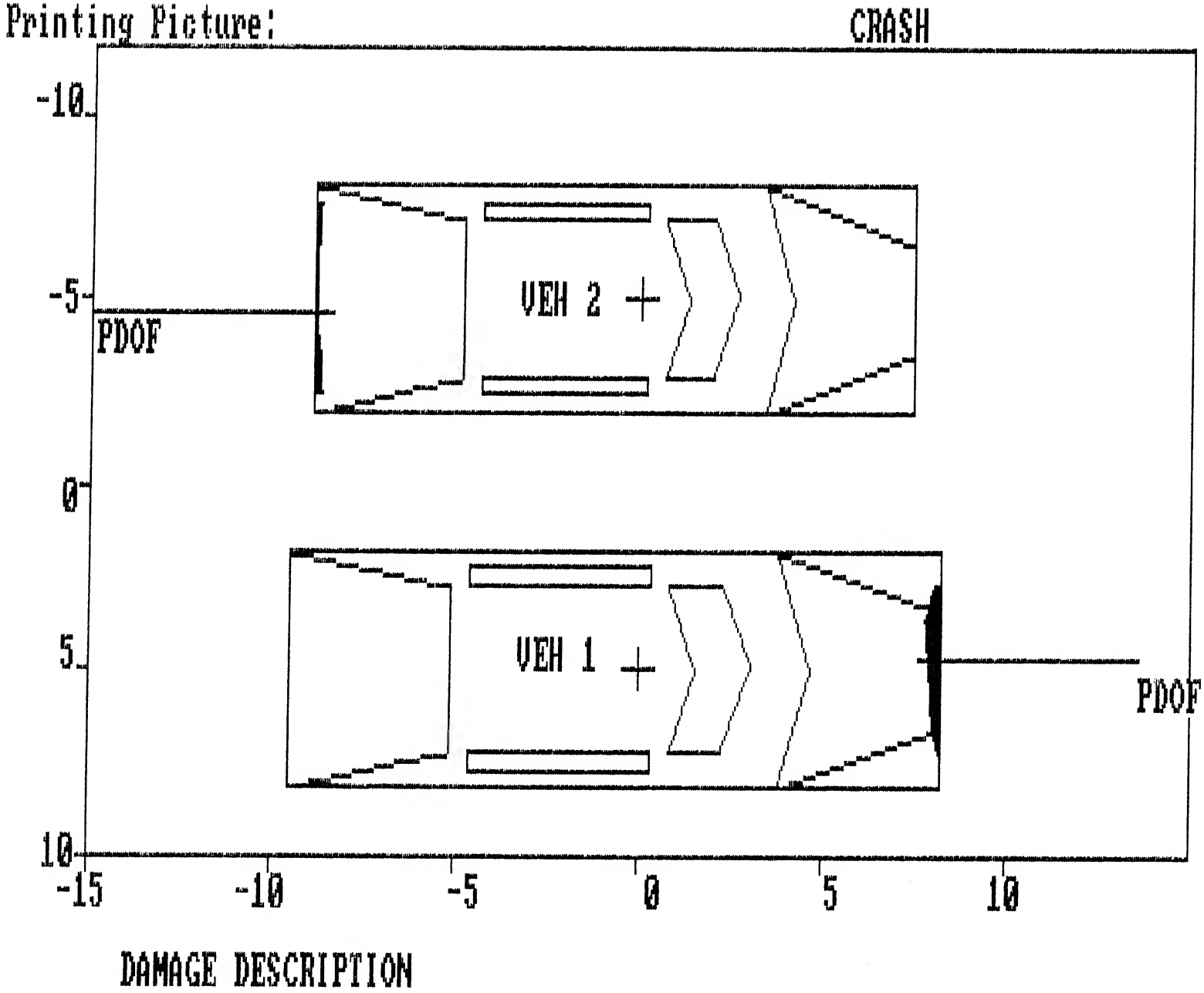


U.S. Department of Transportation
National Highway Traffic Safety Administration

GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number ~~Stratum~~ 94-14
3. Vehicle Number 01

VEHICLE IDENTIFICATION

4. Vehicle Model Year 94
   Code the last two digits of the model year
   (99) Unknown

5. Vehicle Make (specify): 21
   OLDSMOBILE
   Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.
   (99) Unknown

6. Vehicle Model (specify): 003
   98 REGENCY ELITE
   Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.
   (999) Unknown

7. Body Type 04
   Note: Applicable codes may be found on the back of this page.

8. Vehicle Identification Number

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	G	3	C	W	5	2	L	9	R	4						

   Left justify; Slash zeros and letter Z (Ø and Z)
   No VIN—Code all zeros
   Unknown—Code all nines

OFFICIAL RECORDS

9. Police Reported Vehicle Disposition 1
   (0) Not towed due to vehicle damage
   (1) Towed due to vehicle damage
   (9) Unknown

10. Police Reported Travel Speed 999
    Code to the nearest kph (NOTE: 000 means less than 0.5 kph)
    (160) 159.5 kph and above
    (999) Unknown

    ___ mph X 1.6093 = ___ kph

11. Police Reported Alcohol Presence 0
    (0) No alcohol present
    (1) Yes (alcohol present)
    (7) Not reported
    (8) No driver present
    (9) Unknown

    Note: See variables 37 through 55 (Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver 96
    Code actual value (decimal implied before first digit—0.xx)
    (95) Test refused
    (96) None given
    (97) AC test performed, results unknown
    (98) No driver present
    (99) Unknown

    Source: _____

ACCIDENT RELATED

13. Speed Limit 048
    (000) No statutory limit
    Code posted or statutory speed limit in kph
    (999) Unknown

    30 mph X 1.6093 = 048 kph

14. Attempted Avoidance Maneuver 02
    (01) No avoidance actions
    (02) Braking (no lockup)
    (03) Braking (lockup)
    (04) Braking (lockup unknown)
    (05) Releasing brakes
    (06) Steering left
    (07) Steering right
    (08) Braking and steering left
    (09) Braking and steering right
    (10) Accelerating
    (11) Accelerating and steering left
    (12) Accelerating and steering right
    (97) No driver present
    (98) Other action (specify): _____
    (99) Unknown

15. Accident Type 20
    Applicable codes may be found on the back of page two of this field form
    (00) No impact
    Code the number of the diagram that best describes the accident circumstance
    (98) Other accident type (specify): _____
    (99) Unknown

****** SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 ******

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

(01) Convertible (excludes sun-roof, t-bar)
(02) 2-door sedan, hardtop, coupe
(03) 3-door/2-door hatchback
(04) 4-door sedan, hardtop
(05) 5-door/4-door hatchback
(06) Station wagon (excluding van and truck based)
(07) Hatchback, number of doors unknown
(08) Other automobile type (specify):

_____

(09) Unknown automobile type

Automobile Derivatives

(10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
(11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
(12) Large limousine - more than four side doors or stretched chassis
(13) Three-wheel automobile or automobile derivative

Utility Vehicles (≤ 4,500 kgs GVWR)

(14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
(15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
(16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
(19) Utility, unknown body type

Van Based Light Trucks (≤ 4,500 kgs GVWR)

(20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
(21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
(22) Step van or walk-in van (≤ 4,500 kgs GVWR)
(23) Van based motorhome (≤ 4,500 kgs GVWR)
(24) Van based school bus (≤ 4,500 kgs GVWR)
(25) Van based other bus (≤ 4,500 kgs GVWR)
(28) Other van type (Hi-Cube Van, Kary) (specify):

_____

(29) Unknown van type

Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

(30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10 , T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
(31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)
(32) Pickup with slide-in camper
(33) Convertible pickup
(39) Unknown pickup style light conventional truck type

Other Light Trucks (≤ 4,500 kgs GVWR)

(40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
(41) Truck based panel
(42) Light truck based motorhome (chassis mounted)
(45) Other light conventional truck type
(48) Unknown light truck type
(49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

(50) School bus (designed to carry students, not cross country or transit)
(58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):

_____

(59) Unknown bus type

Medium/Heavy Trucks (> 4,500 kgs GVWR)

(60) Step van (> 4,500 kgs GVWR)
(61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
(62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)
(63) Single unit straight truck (> 12,000 kgs GVWR)
(64) Single unit straight truck, GVWR unknown
(65) Medium/heavy truck based motorhome
(67) Truck-tractor with no cargo trailer
(68) Truck-tractor pulling one trailer
(69) Truck-tractor pulling two or more trailers
(70) Truck-tractor (unknown if pulling trailer)
(78) Unknown medium/heavy truck type
(79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

(80) Motorcycle
(81) Moped (motorized bicycle)
(82) Three-wheel motorcycle or moped
(88) Other motored cycle (minibike, motorscooter) (specify):_____
(89) Unknown motored cycle type

Other Vehicles

(90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
(91) Snowmobile
(92) Farm equipment other than trucks
(93) Construction equipment other than trucks
(97) Other vehicle type
(99) Unknown body type

OCCUPANT RELATED

16. Driver Presence in Vehicle: 1
    (0) Driver not present
    (1) Driver present
    (9) Unknown

17. Number of Occupants This Vehicle: 02
    (00-96) Code actual number of occupants for this vehicle
    (97) 97 or more
    (99) Unknown

18. Number of Occupant Forms Submitted: 02

VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight: 1,580
    ____Code weight to nearest 10 kilograms.
    (045) Less than 450 kilograms
    (610) 6,100 kilograms or more
    (999) Unknown

    3,512 lbs X .4536 = 1,580 kgs

    Source: _____

20. Vehicle Cargo Weight: 0,000
    ____Code weight to nearest 10 kilograms.
    (000) Less than 5 kilograms
    (450) 4,500 kilograms or more
    (999) Unknown

    ____,____ lbs X .4536 = ____.____ kgs

RECONSTRUCTION DATA

21. Towed Trailing Unit: 0
    (0) No towed unit
    (1) Yes—towed trailing unit
    (9) Unknown

22. Documentation of Trajectory Data for This Vehicle: 0
    (0) No
    (1) Yes

23. Post Collision Condition of Tree or Pole (For Highest Delta V): 0
    (0) Not collision (for highest delta V) with tree or pole
    (1) Not damaged
    (2) Cracked/sheared
    (3) Tilted <45 degrees
    (4) Tilted ≥45 degrees
    (5) Uprooted tree
    (6) Separated pole from base
    (7) Pole replaced
    (8) Other (specify): _____
    (9) Unknown

24. Rollover: 0
    (0) No rollover (no overturning)

    Rollover (primarily about the longitudinal axis)
    (1) Rollover, 1 quarter turn only
    (2) Rollover, 2 quarter turns
    (3) Rollover, 3 quarter turns
    (4) Rollover, 4 or more quarter turns (specify): _____

    (5) Rollover--end-over-end (i.e., primarily about the lateral axis)
    (9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle): 4

26. Rear Override/Underride (this Vehicle): 0

    (0) No override/underride, or not an end-to-end impact

    Override (see specific CDC)
    (1) 1st CDC
    (2) 2nd CDC
    (3) Other not automated CDC (specify): _____

    Underride (see specific CDC)
    (4) 1st CDC
    (5) 2nd CDC
    (6) Other not automated CDC (specify): _____

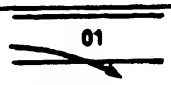
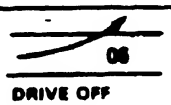
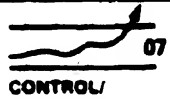
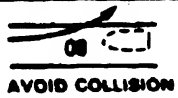
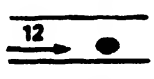
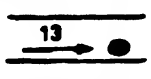
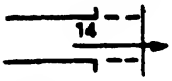
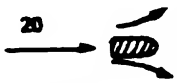
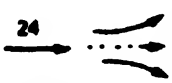
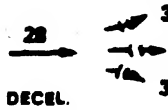
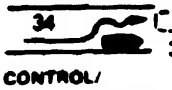
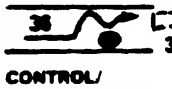
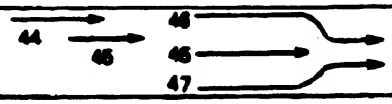
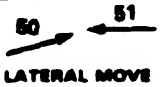
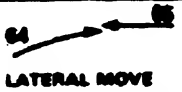
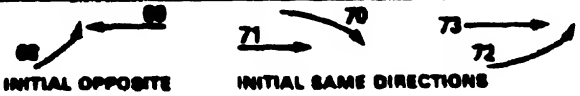
    (7) Medium/heavy truck or bus override
    (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value
(997) Noncollision
(998) Impact with object
(999) Unknown

27. Heading Angle For This Vehicle: 000

28. Heading Angle For Other Vehicle: 000

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER / 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 22 21 23 STOPPED 21, 22, 23	 24 26 25 27 SLOWER 25, 26, 27	 28 30 29 31 DECEL. 29, 30, 31	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN
	E Forward Impact	 34 35 CONTROL/ TRACTION LOSS	 36 37 CONTROL/ TRACTION LOSS	 38 39 AVOID COLLISION WITH VEH.	 40 41 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER / (EACH • 43) SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 45 46 45 47			(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G Head-On	 50 51 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER		(EACH • 53) SPECIFICS UNKNOWN	
	H Forward Impact	 54 55 CONTROL/ TRACTION LOSS	 56 57 CONTROL/ TRACTION LOSS	 58 59 AVOID COLLISION WITH VEH.	 60 61 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER / (EACH • 63) SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 65 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER		(EACH • 67) SPECIFICS UNKNOWN	
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 69 INITIAL OPPOSITE DIRECTIONS / 71 70 73 72 INITIAL SAME DIRECTIONS			(EACH • 74) SPECIFICS OTHER / (EACH • 75) SPECIFICS UNKNOWN	
	K Turn Into Path	 77 76 78 78 TURN INTO SAME DIRECTION / 81 80 83 82 TURN INTO OPPOSITE DIRECTIONS			(EACH • 84) SPECIFICS OTHER / (EACH • 85) SPECIFICS UNKNOWN	
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87 86 88 89			(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN
VI Miscellaneous	M Backing Etc.	 92 BACKING VEH. / 93 OTHER VEH. OR OBJECT			98 Other Accident Type 99 Unknown Accident Type 00 No Impact	

29. Basis for Total Delta V (highest) 1

Delta V Calculated
(1) CRASH program—damage only routine
(2) CRASH program—damage and trajectory routine
(3) Missing vehicle algorithm

Delta V Not Calculated
(4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
(5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
(6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

Highest

30. Total Delta V 016

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

(NOTE: 000 means less than 0.5 kph)
(160) 159.5 kph and above
(999) Unknown

31. Longitudinal Component of Delta V 0016

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

(NOTE: __000 means greater than −0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(__999) Unknown

Highest

32. Lateral Component of Delta V +/− 000

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

(NOTE: __000 means greater than −0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(__999) Unknown

33. Energy Absorption 019,900

19916 Nearest 100 joules (highest)

_____ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)
(9997) 999,650 joules or more
(9999) Unknown

34. Confidence In Reconstruction Program Results (For Highest Delta V) 1
(0) No reconstruction
(1) Collision fits model — results appear reasonable
(2) Collision fits model — results appear high
(3) Collision fits model — results appear low
(4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection 1
(0) No inspection
(1) Complete inspection
(2) Partial inspection (specify):
_____

36. Is this an AOPS Vehicle? 1
(0) No
(1) Yes - researcher determined
(2) VIN determined air bag system
(3) VIN determined automatic (passive) belts
(4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [✓] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

37. Police Reported Other Drug Presence 0
    (0) No other drug(s) present
    (1) Yes [other drug(s) present]
    (7) Not reported
    (8) No driver present
    (9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver 0
    (0) No DEC process available or given
    (1) DEC process given, results known
    (2) DEC process given, results unknown
    (3) DEC process available, unknown if given
    (8) No driver present

39. Other Drug Specimen Test Type For Driver 0
    (0) No specimen test given
    (1) Blood test
    (2) Urine test
    (3) Other specimen tests (specify): _____
    (7) Unspecified specimen test
    (8) No driver present
    (9) Unknown if specimen test given

DRUG EVALUATION CLASSIFICATION
OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. 0	41. 0
Depressant Drug	42. 0	43. 0
Stimulant Drug	44. 0	45. 0
Hallucinogen Drug	46. 0	47. 0
Cannabinoid Drug	48. 0	49. 0
Phencyclidine (PCP)	50. 0	51. 0
Inhalant Drug	52. 0	53. 0
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. 0	55. 0

Codes For DEC Test Results

(0) No DEC test given
(1) Passed DEC test
(2) Failed DEC test
(3) DEC test given—results unknown
(8) No driver present
(9) Unknown if DEC test given

Codes for Specimen Test Results

(0) No specimen test given
(1) Drug not found in specimen
(2) Drug found in specimen
(7) Specimen test given, results unknown or not obtained
(8) No driver present
(9) Unknown if specimen test given

OTHER DATA

56. Driver's Zip Code ____ ____ ____ ____ ____

(00000) Driver not present
(00001) Driver not a resident of U.S. or territories
_____ Code actual 5-digit zip code
(99999) Unknown

57. Driver's Race/Ethnic Origin 1
(0) Driver not present
(1) White (non-Hispanic)
(2) Black (non-Hispanic)
(3) White (Hispanic)
(4) Black (Hispanic)
(5) American Indian, Eskimo or Aleut
(6) Asian or Pacific Islander
(8) Other (specify):
_____
(9) Unknown

58. Vehicle Special Use (This Trip) 0
(0) No special use
(1) Taxi
(2) Vehicle used as school bus
(3) Vehicle used as other bus
(4) Military
(5) Police
(6) Ambulance
(7) Fire truck or car
(8) Other (specify): _____
(9) Unknown

ROLLOVER DATA

If GV07 (Body Type) ≠ 1-49, leave GV59-GV63 blank.
If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.
If GV24 = 9, then GV59-GV63 must equal 9.

59. Rollover Initiation Type 0
(0) No rollover
(1) Trip-over
(2) Flip-over
(3) Turn-over
(4) Climb-over
(5) Fall-over
(6) Bounce-over
(7) Collision with another vehicle
(8) Other rollover initiation type specify):
_____
(9) Unknown rollover initiation type

60. Location of Rollover Initiation 0
(0) No rollover
(1) On roadway
(2) On shoulder—paved
(3) On shoulder—unpaved
(4) On roadside or divided trafficway median
(9) Unknown

61. Rollover Initiation Object Contacted 00

62. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0
(0) No rollover
(1) Wheels/tires
(2) Side plane
(3) End plane
(4) Undercarriage
(5) Other location on vehicle (specify):
_____
(8) Non-contact rollover forces (specify):
_____
(9) Unknown

63. Direction of Initial Roll 0
(0) No rollover
(1) Roll right - primarily about the longitudinal axis
(2) Roll left - primarily about the longitudinal axis
(5) End-over-end (i.e., primarily about the lateral axis)
(9) Unknown roll direction

PRECRASH DATA

64. Pre-Event Movement (Prior to Recognition of Critical Event) 01
(01) Going straight
(02) Slowing or stopping in traffic lane
(03) Starting in traffic lane
(04) Stopped in traffic lane
(05) Passing or overtaking another vehicle
(06) Disabled or parked in travel lane
(07) Leaving a parking position
(08) Entering a parking position
(09) Turning right
(10) Turning left
(11) Making a U-turn
(12) Backing up (other than for parking position)
(13) Negotiating a curve
(14) Changing lanes
(15) Merging
(16) Successful avoidance maneuver to a previous critical event
(97) Other (specify):
_____
(98) No driver present
(99) Unknown

CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

(00) No rollover
(01-30) — Vehicle Number

Noncollision
(31) Turn-over — fall-over
(33) Jackknife

Collision With Fixed Object
(41) Tree (≤ 10 cm in diameter)
(42) Tree (> 10 cm in diameter)
(43) Shrubbery or bush
(44) Embankment

(45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post
(50) Pole or post (≤ 10 cm in diameter)
(51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
(52) Pole or post (> 30 cm in diameter)
(53) Pole or post (diameter unknown)

(54) Concrete traffic barrier
(55) Impact attenuator
(56) Other traffic barrier (includes guardrail) (specify):_____

(57) Fence
(58) Wall
(59) Building
(60) Ditch or culvert
(61) Ground
(62) Fire hydrant
(63) Curb
(64) Bridge
(68) Other fixed object (specify):

_____
(69) Unknown fixed object

Collision with Nonfixed Object
(71) Motor vehicle not in-transport
(76) Animal
(77) Train
(78) Trailer, disconnected in transport
(79) Object fell from vehicle in-transport
(88) Other nonfixed object (specify):

_____
(89) Unknown nonfixed object

(98) Other event (specify):

_____
(99) Unknown event or object

PRECRASH DATA (Continued)

65. Critical Precrash Event 50

This Vehicle Loss of Control Due To:
(01) Blow out or flat tire
(02) Stalled engine
(03) Disabling vehicle failure (e.g., wheel fell off) (specify): _____
(04) Non-disabling vehicle problem (e.g., hood flew up) (specify): _____
(05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): _____
(06) Traveling too fast for conditions
(08) Other cause of control loss (specify): _____
(09) Unknown cause of control loss

This Vehicle Traveling
(10) Over the lane line on left side of travel lane
(11) Over the lane line on right side of travel lane
(12) Off the edge of the road on the left side
(13) Off the edge of the road on the right side
(14) End departure
(15) Turning left at intersection
(16) Turning right at intersection
(17) Crossing over (passing through) intersection
(19) Unknown travel direction

Other Motor Vehicle In Lane
(50) Stopped
(51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
(52) Traveling in same direction with higher speed
(53) Traveling in opposite direction
(54) In crossover
(55) Backing
(59) Unknown travel direction of other motor vehicle in lane

Other Motor Vehicle Encroaching Into Lane
(60) From adjacent lane (same direction)—over left lane line
(61) From adjacent lane (same direction)—over right lane line
(62) From opposite direction—over left lane line
(63) From opposite direction—over right lane line
(64) From parking lane
(65) From crossing street, turning into same direction
(66) From crossing street, across path
(67) From crossing street, turning into opposite direction
(68) From crossing street, intended path not known
(70) From driveway, turning into same direction
(71) From driveway, across path
(72) From driveway, turning into opposite direction
(73) From driveway, intended path not known
(74) From entrance to limited access highway
(78) Encroachment by other vehicle—details unknown

Pedestrian or Pedalcyclist, or Other Nonmotorist
(80) Pedestrian in roadway
(81) Pedestrian approaching roadway
(82) Pedestrian—unknown location
(83) Pedalcyclist or other nonmotorist in roadway (specify): _____
(84) Pedalcyclist or other nonmotorist approaching roadway (specify): _____
(85) Pedalcyclist or other nonmotorist—unknown location (specify): _____

Object or Animal
(87) Animal in roadway
(88) Animal approaching roadway
(89) Animal—unknown location
(90) Object in roadway
(91) Object approaching roadway
(92) Object—unknown location

(98) Other critical precrash event (specify): _____
(99) Unknown

For Corrective Actions Attempted see variable GV14 (Attemped Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 1
(0) No avoidance maneuver
(1) Tracking
(2) Skidding longitudinally—rotation less than 30 degrees
(3) Skidding laterally—clockwise rotation
(4) Skidding laterally—counterclockwise rotation
(7) Other vehicle loss-of-control (specify): _____
(8) No driver present
(9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 1
(0) No avoidance maneuver
(1) Vehicle stayed in travel lane where avoidance maneuver was initiated
(2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
(3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
(4) Vehicle departed roadway
(5) Avoidance maneuver initiated off roadway
(8) No driver present
(9) Directional consequences unknown

***** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), *****
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

***** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE *****
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

U.S. Department of Transportation

National Highway Traffic Safety Administration

EXTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number ____

2. ~~Case Number - Stratum~~ 94-14

3. Vehicle Number 01

VEHICLE IDENTIFICATION

VIN 1G3CW52L9R4_____ Model Year 94

Vehicle Make (specify): OLDSMOBILE Vehicle Model (specify): 98 REGENCY ELITE

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	BUMPER FACIA, HOOD FACE	FULL FRONTAL WIDTH
	134.6 cm (53.0")	140 cm (55.125")

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

Specific Impact Number	Plane of Impact C-Measurements	Direct Damage		Field L	C_1	C_2	C_3	C_4	C_5	C_6	±D
		Width (CDC)	Max Crush								
1	UPPER RAD										
	SUPPORT	134.6	25.1	140	9.1	24.4	19.7	16.8	14.2	2.3	0

HS Form 435A (Rev. 1/94)

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	110.7	inches	x 2.54	=	281	cm
Overall Length	205.5	inches	x 2.54	=	522	cm
Maximum Width	74.6	inches	x 2.54	=	189	cm
Curb Weight	3,512	pounds	x .4536	=	1,580	kg
Average Track	60.9	inches	x 2.54	=	155	cm
Front Overhang	___	inches	x 2.54	=	___	cm
Rear Overhang	___	inches	x 2.54	=	___	cm
Undeformed End Width	58.8	inches	x 2.54	=	149	cm
Engine Size: cyl./displ.	3800	cc	x .001	=	3.8	L
	___	CID	x .0164	=	___	L

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE

	a. Rotation physically restricted	b. Tire deflated
RF	0	0
LF	0	0
RR	0	0
LR	0	0

(1) Yes (2) No (8) NA (9) Unk.

TYPE OF TRANSMISSION

☐ Manual ☒ Automatic 4-SPEED

ORIGINAL SPECIFICATIONS

Wheelbase	281	cm
Overall Length	522	cm
Maximum Width	189	cm
Curb Weight	1580	kg
Average Track	155	cm
Front Overhang		cm
Rear Overhang		cm
Undeformed End Width	149	cm
Engine Size: cyl./displ.	3.8	L

WHEEL STEER ANGLES

(For locked front wheels or displaced rear axles only)

RF ± ___ ___ o
LF ± ___ ___ o
RR ± ___ ___ o
LR ± ___ ___ o

Within ± 5 degrees

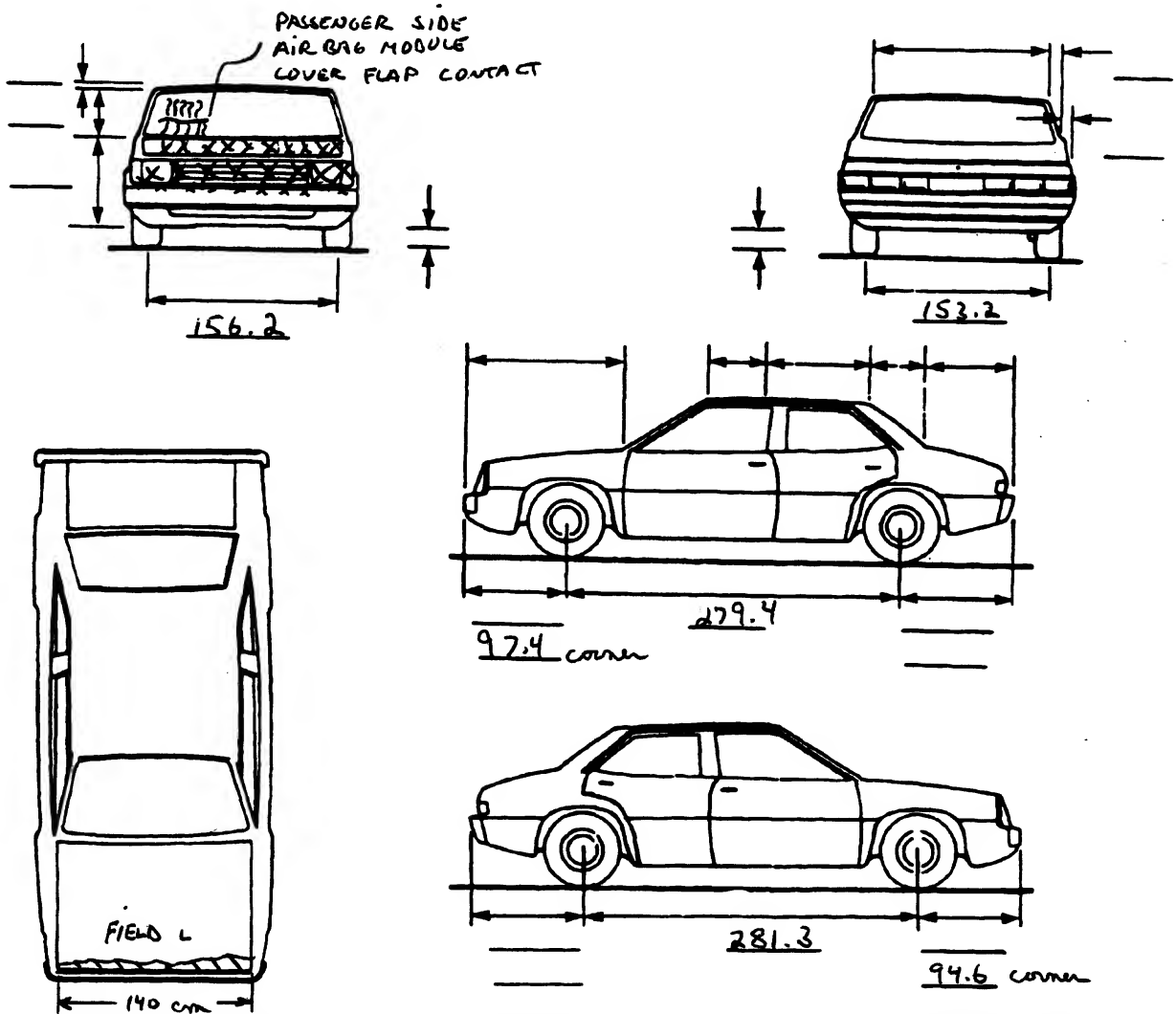
DRIVE WHEELS

☒ FWD ☐ RWD ☐ 4WD

Approximate Cargo Weight

0 kg

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

CDC WORKSHEET

CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

Noncollision
- (31) Overturn — rollover
- (32) Fire or explosion
- (33) Jackknife
- (34) Other intraunit damage (specify): _____
- (35) Noncollision injury
- (38) Other noncollision (specify): _____
- (39) Noncollision — details unknown

Collision With Fixed Object
- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment
- (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post
- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)
- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail) (specify): _____
- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____
- (69) Unknown fixed object

Collision with Nonfixed Object
- (71) Motor vehicle not in-transport
- (72) Pedestrian
- (73) Cyclist or cycle
- (74) Other nonmotorist or conveyance
- (75) Vehicle occupant
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (79) Object fell from vehicle in-transport
- (88) Other nonfixed object (specify): _____
- (89) Unknown nonfixed object
- (98) Other event (specify): _____
- (99) Unknown event or object

DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	360	00	F	D	M	W	01

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. 01	5. 02	6. 12	7. F	8. D	9. M	10. W	11. 01

Second Highest Delta "V"

12.	13.	14.	15.	16.	17.	18.	19.

CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. L	21. C_1	C_2	C_3	C_4	C_5	C_6	22. ±D
140	009	024	020	017	014	002	+ - 000

Second Highest Delta "V"

23. L	24. C_1	C_2	C_3	C_4	C_5	C_6	25. ±D
							+ -

26. Are CDCs Documented but Not Coded on The Automated File? 0
(0) No
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 1
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

28. Original Wheelbase 281
Code to the nearest centimeter
(999) Unknown

___.___ inches X 2.54 = ___ centimeters

29. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle? 0
    (0) No post manufacturer modifications
    (1) Yes - post manufacturer modifications (specify): _____
    _____
    _____
    (Include photograph of CERTIFICATION PLACARD in case report)
    (9) Unknown if vehicle is modified

30. Fire Occurrence 0
    (0) No fire

    Yes, fire occurred
    (1) Minor
    (2) Major
    (9) Unknown

31. Origin of Fire 0
    (0) No fire
    (1) Vehicle exterior (front, side, back, top)
    (2) Exhaust system
    (3) Fuel tank (and other fuel retention system parts)
    (4) Engine compartment
    (5) Cargo/trunk compartment
    (6) Instrument panel
    (7) Passenger compartment area
    (8) Other location (specify):
    _____
    (9) Unknown

32. Type of Fuel Tank-1 1

33. Type of Fuel Tank-2 0
    (0) No fuel tank (electrical vehicle)
    (1) Metallic
    (2) Non-metallic
    (9) Unknown

34. Fuel Tank-1 Location 1

35. Fuel Tank-2 Location 0
    (0) No fuel tank
    (1) Aft of center of the rear wheels (rear axle) centered
    (2) Aft of center of the rear wheels (rear axle) left side
    (3) Aft of center of the rear wheels (rear axle) right side
    (4) Forward of center of the rear wheels (rear axle) centered
    (5) Forward of center of the rear wheels (rear axle) left side
    (6) Forward of center of the rear wheels (rear axle) right side
    (7) Over center of the rear wheels (rear axle)
    (8) Other (specify):
    _____
    (9) Unknown

36. Fuel Tank-1 Filler Cap Location 2

37. Fuel Tank-2 Filler Cap Location 0
    (0) No fuel tank
    (1) On back plane
    (2) Aft of center of the rear wheels (rear axle) on left side plane
    (3) Aft of center of the rear wheels (rear axle) on right side plane
    (4) Forward of center of the rear wheels (rear axle) on left side plane
    (5) Forward of center of the rear wheels (rear axle) on right side plane
    (6) Over the center of the rear wheels (rear axle) on left side plane
    (7) Over the center of the rear wheels (rear axle) on right side plane
    (8) Other (specify):_____
    (9) Unknown

38. Fuel Tank-1 Damage 1

39. Fuel Tank-2 Damage 0
    (0) No fuel tank
    (1) No damage to fuel tank
    (2) Deformed, no seam failure
    (3) Deformed, with a seam failure
    (4) Punctured
    (5) Lacerated (ripped)
    (6) Abraded (scraped)
    (7) Filler neck separation from the fuel tank
    (8) Other damage (specify):
    _____
    (9) Unknown

40. Location of Fuel System-1 Leakage 1

41. Location of Fuel System-2 Leakage 0
(0) No fuel tank
(1) No fuel leakage

Primary Area Of Leakage
(2) Tank
(3) Filler neck
(4) Cap
(5) Lines/pump/filter
(6) Vent/emission recovery
(8) Other (specify): _____
(9) Unknown

42. Fuel Type-1 01

43. Fuel Type-2 00

Single Fuel Type
(00) No fuel tank
(01) Gasoline
(02) Diesel
(03) CNG (Compressed Natural Gas)
(04) LPG (Liquid Petroleum Gas) also known as Propane
(05) LNG (Liquid Natural Gas)
(06) Methanol (M100 or M85)
(07) Ethanol (E100 or E85)
(08) Other (Hydrogen or others) (specify): _____

Electric Powered or Electric/Solar Powered Vehicles
(10) Lead Acid Battery
(11) Nickel-Iron Battery
(12) Nickel-Cadmium Battery
(13) Sodium Metal Chloride Battery
(14) Sodium Sulfur Battery
(18) Other (Specify): _____

(98) Other Hybrid (specify): _____

(99) Unknown fuel type

44. Is This Vehicle Equipped With More Than Two Fuel Tanks? 0
(0) No (one or two tanks only)

Yes - More Than Two Tanks
(1) Yes -- no damage to any tank or filler cap and no fuel system leakage
(2) Yes -- no damage to any tank or filler cap but there is fuel system leakage (specify leakage location): _____
(3) Yes -- damage to an additional tank or filler cap and there is fuel system leakage (specify the following):
Type of tank _____
Tank location _____
Filler cap location _____
Tank damage _____
Location of leakage _____
Type of fuel _____
(9) Unknown if more than two tanks

COMMENTS

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS *** (I.E., GV09=0 OR 9 AND GV36=0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.

BEST AVAILABLE

U.S. Department of Transportation
National Highway Traffic Safety Administration

INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 94-14
3. Vehicle Number 01

INTEGRITY

4. Passenger Compartment Integrity 00
   (00) No integrity loss

   Yes, Integrity Was Lost Through
   (01) Windshield
   (02) Door (side)
   (03) Door/hatch (back door)
   (04) Roof
   (05) Roof glass
   (06) Side window
   (07) Rear window (backlight)
   (08) Roof and roof glass
   (09) Windshield and door (side)
   (10) Windshield and roof
   (11) Side and rear window (side window and backlight)
   (12) Windshield and side window
   (13) Door and side window
   (98) Other combination of above (specify): _____
   (99) Unknown

Door, Tailgate or Hatch Opening

5. LF 1 6. RF 1 7. LR 1 8. RR 1 9. TG/H 0

   (0) No door/gate/hatch
   (1) Door/gate/hatch remained closed and operational
   (2) Door/gate/hatch came open during collision
   (3) Door/gate/hatch jammed shut
   (8) Other (specify): _____
   (9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code Ø

10. LF 1 11. RF 1 12. LR 1 13. RR 1 14. TG/H 0

   (0) No door/gate/hatch or door not opened

   Door, Tailgate or Hatch Came Open During Collision
   (1) Door operational (no damage)
   (2) Latch/striker failure due to damage
   (3) Hinge failure due to damage
   (4) Door structure failure due to damage
   (5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage
   (6) Latch/striker and hinge failure due to damage
   (8) Other failure (specify): _____
   (9) Unknown

GLAZING

Glazing Damage from Impact Forces

15. WS 2 16. LF 0 17. RF 0 18. LR 0 19. RR 0
20. BL 0 21. Roof 4 22. Other 8

   (0) No glazing damage from impact forces
   (2) Glazing in place and cracked from impact forces
   (3) Glazing in place and holed from impact forces
   (4) Glazing out-of-place (cracked or not) and not holed from impact forces
   (5) Glazing out-of-place and holed from impact forces
   (6) Glazing disintegrated from impact forces
   (7) Glazing removed prior to accident
   (8) No glazing
   (9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0
28. BL 0 29. Roof 0 30. Other 0

   (0) No occupant contact to glazing or no glazing
   (1) Glazing contacted by occupant but no glazing damage
   (2) Glazing in place and cracked by occupant contact
   (3) Glazing in place and holed by occupant contact
   (4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
   (5) Glazing out-of-place by occupant contact and holed by occupant contact
   (6) Glazing disintegrated by occupant contact
   (9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As Ø

Type of Window/Windshield Glazing

31. WS 1 32. LF 2 33. RF 2 34. LR 2 35. RR 2
36. BL 2 37. Roof 2 38. Other 0

   (0) No glazing contact and no damage, or no glazing
   (1) AS-1 — Laminated
   (2) AS-2 — Tempered
   (3) AS-3 — Tempered-tinted
   (4) AS-14 — Glass/Plastic
   (8) Other (specify): _____
   (9) Unknown

Window Precrash Glazing Status

39. WS 1 40. LF 2 41. RF 2 42. LR 2 43. RR 2
44. BL 1 45. Roof 2 46. Other 0

   (0) No glazing contact and no damage, or no glazing
   (1) Fixed
   (2) Closed
   (3) Partially opened
   (4) Fully opened
   (9) Unknown

INTRUSION WORKSHEET

Note: Sketch intruded areas

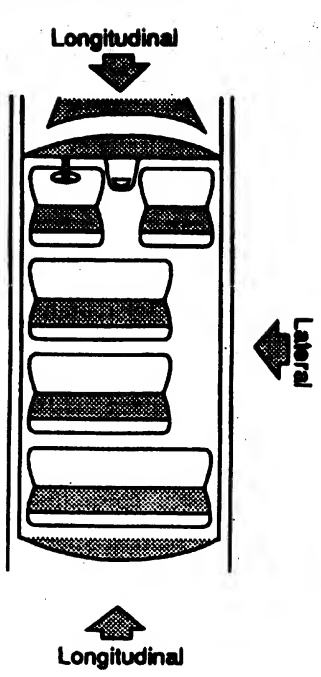
Row Width (cm)

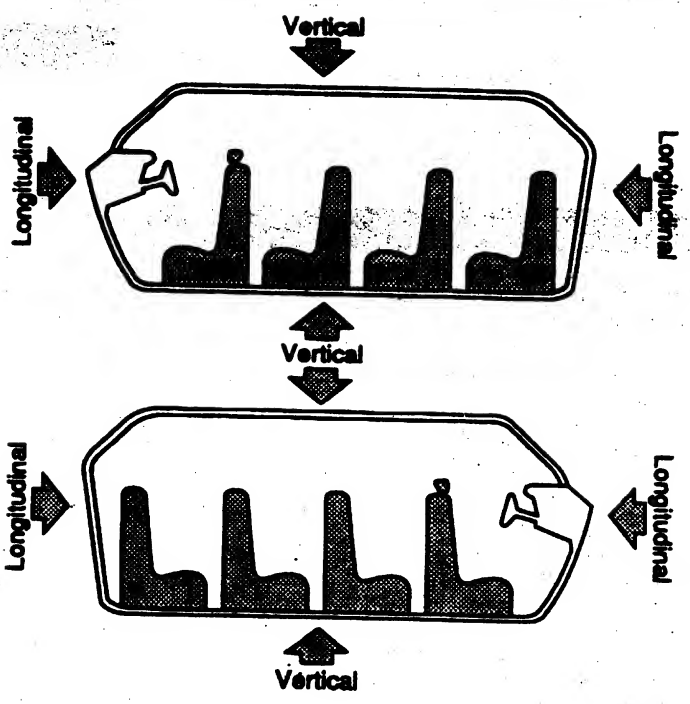
_____

_____

_____

_____





LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters) COMPARISON VALUE	—	INTRUDED VALUE	=	INTRUSION	DOMINANT CRUSH DIRECTION
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		

Document no more than the 15 most severe intrusions

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47.___ ___	48.___ ___	49.___	50.___
2nd	51.___ ___	52.___ ___	53.___	54.___
3rd	55.___ ___	56.___ ___	57.___	58.___
4th	59.___ ___	60.___ ___	61.___	62.___
5th	63.___ ___	64.___ ___	65.___	66.___
6th	67.___ ___	68.___ ___	69.___	70.___
7th	71.___ ___	72.___ ___	73.___	74.___
8th	75.___ ___	76.___ ___	77.___	78.___
9th	79.___ ___	80.___ ___	81.___	82.___
10th	83.___ ___	84.___ ___	85.___	86.___

LOCATION OF INTRUSION

Front Seat
- (11) Left
- (12) Middle
- (13) Right

Second Seat
- (21) Left
- (22) Middle
- (23) Right

Third Seat
- (31) Left
- (32) Middle
- (33) Right

Fourth Seat
- (41) Left
- (42) Middle
- (43) Right

- (97) Catastrophic
- (98) Other enclosed area (specify) _____
- (99) Unknown

INTRUDING COMPONENT

Interior Components
- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Door panel (side)
- (12) Roof (or convertible top)
- (13) Roof side rail
- (14) Windshield
- (15) Windshield header
- (16) Window frame
- (17) Floor pan (includes sill)
- (18) Backlight header
- (19) Front seat back
- (20) Second seat back
- (21) Third seat back
- (22) Fourth seat back
- (23) Fifth seat back
- (24) Seat cushion
- (25) Back door/panel (e.g., tailgate)
- (26) Other interior component (specify): _____
- (27) Side panel - forward of the A (A2)-pillar
- (28) Side panel - rear of the A (A2)-pillar

NO INTRUSION

Exterior Components
- (30) Hood
- (31) Outside surface of this vehicle (specify): _____
- (32) Other exterior object in the environment (specify): _____
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify): _____
- (99) Unknown

MAGNITUDE OF INTRUSION
- (1) ≥ 3 centimeters but < 8 centimeters
- (2) ≥ 8 centimeters but < 15 centimeters
- (3) ≥ 15 centimeters but < 30 centimeters
- (4) ≥ 30 centimeters but < 46 centimeters
- (5) ≥ 46 centimeters but < 61 centimeters
- (6) ≥ 61 centimeters
- (7) Catastrophic
- (9) Unknown

DOMINANT CRUSH DIRECTION
- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE	–	DAMAGE VALUE	=	DEFORMATION
	–		=	
	–		=	
	–		=	
	–		=	

STEERING COLUMN

87. Steering Column Type — 2
(1) Fixed column
(2) Tilt column
(3) Telescoping column
(4) Tilt and telescoping column
(8) Other column type (specify): _____
(9) Unknown

88. Blank — X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

89. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

90. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

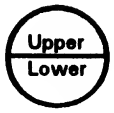
91. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

92. Steering Rim/Spoke Deformation — 0 0
_____Code actual measured deformation to the nearest centimeter
(00) No steering rim deformation
(01-14) Actual measured value in centimeters
(15) 15 centimeters or more
(98) Observed deformation cannot be measured
(99) Unknown

93. Location of Steering Rim/Spoke Deformation — 0 0
(00) No steering rim deformation

Quarter Sections
(01) Section A
(02) Section B
(03) Section C
(04) Section D

Half Sections
(05) Upper half of rim/spoke
(06) Lower half of rim/spoke
(07) Left half of rim/spoke
(08) Right half of rim/spoke



(09) Complete steering wheel collapse
(10) Undetermined location
(99) Unknown

INSTRUMENT PANEL

94. Odometer Reading — 0 0 1,000
_____kilometers—Code to the nearest 1,000 kilometers
(000) No odometer
(001) Less than 1,500 kilometers
(500) 499,500 kilometers or more
(999) Unknown

___,401 miles X 1.6093 = ___,645 kilometers

Source: _____

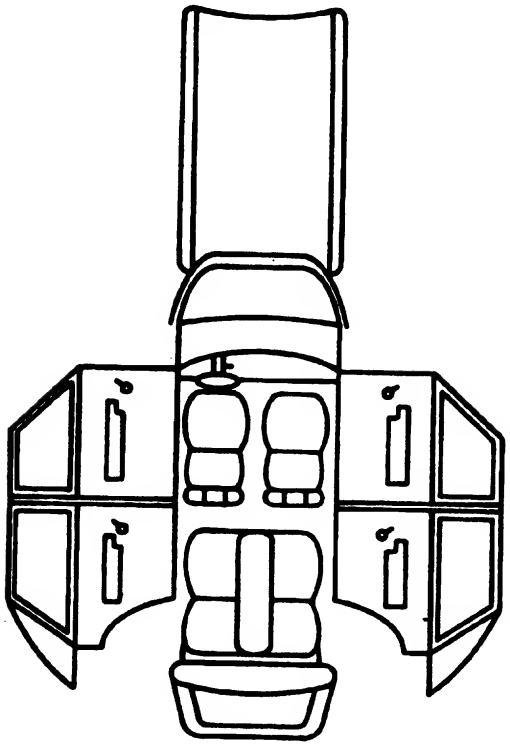
95. Instrument Panel Damage from Occupant Contact? — 0
(0) No
(1) Yes
(9) Unknown

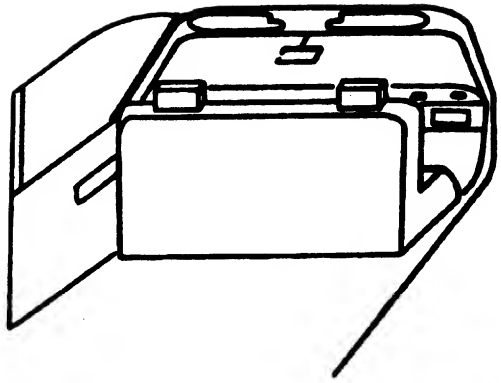
96. Knee Bolsters Deformed from Occupant Contact? — 0
(0) No
(1) Yes
(8) Not present
(9) Unknown

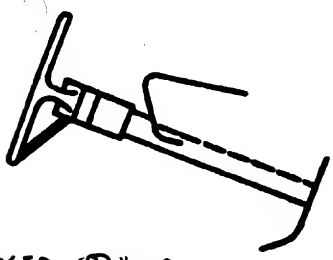
97. Did Glove Compartment Door Open During Collision(s)? — 1
(0) No
(1) Yes
(8) Not present
(9) Unknown

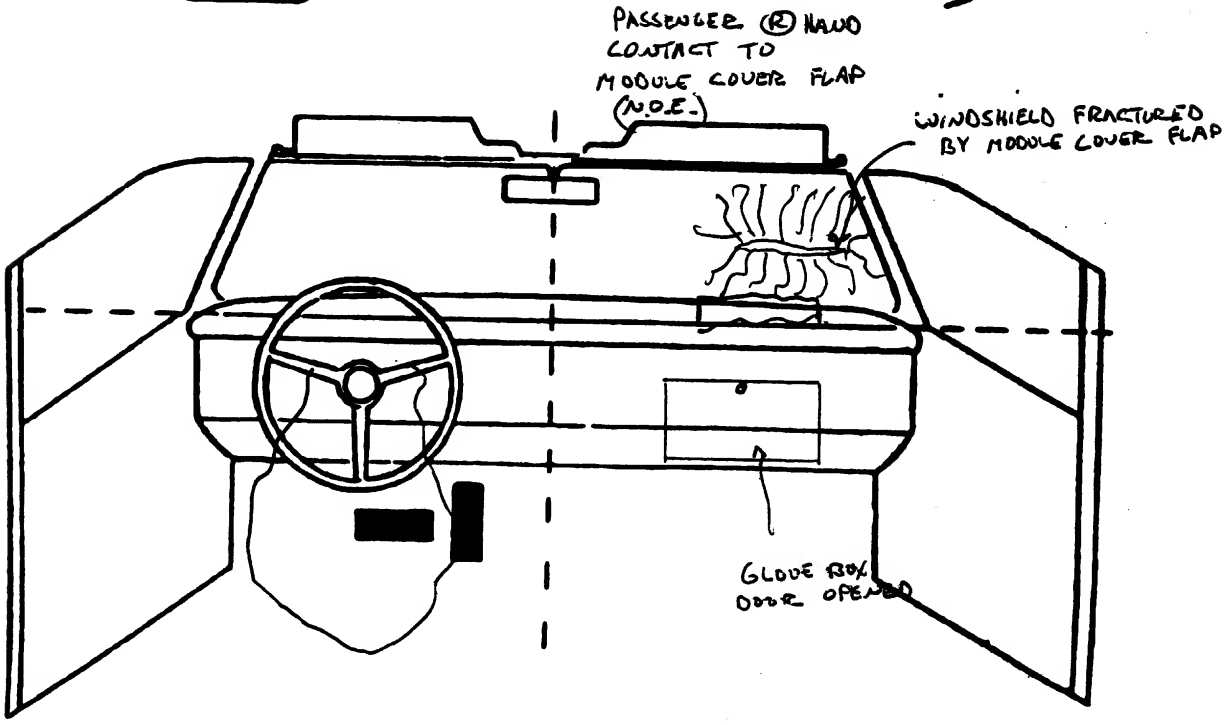
VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment









Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure.
Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.
Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left	Right
FIRST	Availability/Function	1	1
	Deployment	1	1
	Failure	1	1

Air Bag System Availability/Function
(0) Not equipped/not available
(1) Air bag

Non-functional
(2) Air bag disconnected (specify): _____
(3) Air bag not reinstalled
(9) Unknown

Air Bag System Deployment
(0) Not equipped/not available
(1) Air bag deployed during accident (as a result of impact)
(2) Air bag deployed inadvertently just prior to accident
(3) Air bag deployed, accident sequence undetermined
(4) Nondeployed
(5) Unknown if deployed
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
(9) Unknown

Are There Indications of Air Bag System Failure?
(0) Not equipped/not available
(1) No
(2) Yes (specify): _____
(9) Unknown

AUTOMATIC BELTS

		Left	Right
FIRST	Availability/Function	0	0
	Use		
	Type		
	Proper Use		
	Failure Modes		

Automatic (Passive) Belt System Availability/Function
(0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional
(4) Automatic belts destroyed or rendered inoperative
(9) Unknown

Automatic (Passive) Belt System Use
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)
(3) Automatic belt use unknown
(9) Unknown

Automatic (Passive) Belt System Type
(0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

Proper Use of Automatic (Passive) Belt System
(0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly
(3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of automatic belt system (specify): _____
(9) Unknown

Automatic (Passive) Belt Failure Modes During Accident
(0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify):
(8) Other automatic belt failure (specify): _____
(9) Unknown

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	17	2	(R) HAND	NONE, FRACTURES	1
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT
- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify):_____
- (19) Other front object (specify):

LEFT SIDE
- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify):
- (28) Left side window sill

RIGHT SIDE
- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.
- (37) Other right side object (specify):
- (38) Right side window sill

INTERIOR
- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):_____
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify):
- (47) Interior loose objects
- (48) Child safety seat (specify):
- (49) Other interior object (specify):

ROOF
- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR
- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR
- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

CONFIDENCE LEVEL OF CONTACT POINT
- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

MANUAL RESTRAINTS

NOTES: Encode the applicable data **for each seat position** in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Ocupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	3	4
	Evidence of usage	04	-	04
	Used in this crash?	04	-	04
	Proper Use	1	-	1
	Failure Modes	1	-	1
SECOND	Availability	4	3	4
	Evidence of usage	-	-	-
	Used in this crash?			
	Proper Use			
	Failure Modes			
OTHER	Availability			
	Evidence of usage			
	Used in this crash?			
	Proper Use			
	Failure Modes			

Manual (Active) Belt System Availability
- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

Integral Belt Partially Destroyed
- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify): _____
- (9) Unknown

Manual (Active) Belt System Use
- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): _____
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown
- (08) Other belt used (specify): _____
- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

Proper Use of Manual (Active) Belts
- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly
- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____
- (8) Other improper use of manual belt system (specify): _____
- (9) Unknown

Manual (Active) Belt Failure Modes During Accident
- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other manual belt failure (specify): _____
- (9) Unknown

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat

   (0) No child safety seat
   (1) Infant seat
   (2) Toddler seat
   (3) Convertible seat
   (4) Booster seat
   (7) Other type child safety seat (specify):

   _____

   (8) Unknown child safety seat type
   (9) Unknown if child safety seat used

2. Child Safety Seat Orientation

   (00) No child safety seat

   Designed for Rear Facing for This Age/Weight
   (01) Rear facing
   (02) Forward facing
   (08) Other orientation (specify):

   _____

   (09) Unknown orientation

   Designed for Forward Facing for This Age/Weight
   (11) Rear facing
   (12) Forward facing
   (18) Other orientation (specify):

   _____

   (19) Unknown orientation

   Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
   (21) Rear facing
   (22) Forward facing
   (28) Other orientation (specify):

   _____

   (29) Unknown orientation

   (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage
   Note: Options Below Are Used for Variables 3-5.

   (00) No child safety seat

   Not Designed with Harness/Shield/Tether
   (01) After market harness/shield/tether added, not used
   (02) After market harness/shield/tether used
   (03) Child safety seat used, but no after market harness/shield/tether added
   (09) Unknown if harness/shield/tether added or used

   Designed With Harness/Shield/Tether
   (11) Harness/shield/tether not used
   (12) Harness/shield/tether used
   (19) Unknown if harness/shield/tether used

   Unknown If Designed With Harness/Shield/Tether
   (21) Harness/shield/tether not used
   (22) Harness/shield/tether used
   (29) Unknown if harness/shield/tether used

   (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model
   (Specify make/model and occupant number)

   _____

   _____

   _____

   _____

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for **each seat position** in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	-	3
	Seat Type	06	06	06
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

Head Restraint Type/Damage by Occupant at This Occupant Position

(0) No head restraints
(1) Integral — no damage
(2) Integral — damaged during accident
(3) Adjustable — no damage
(4) Adjustable — damaged during accident
(5) Add-on — no damage
(6) Add-on — damaged during accident
(8) Other Specify): _____
(9) Unknown

Seat Type (this Occupant Position)

(00) Occupant not seated or no seat
(01) Bucket
(02) Bucket with folding back
(03) Bench
(04) Bench with separate back cushions
(05) Bench with folding back(s)
(06) Split bench with separate back cushions
(07) Split bench with folding back(s)
(08) Pedestal (i.e., column supported)
(09) Other seat type (specify): _____
(10) Box mounted seat (i.e., van type)
(99) Unknown

Seat Performance (this Occupant Position)

(0) Occupant not seated or no seat
(1) No seat performance failure(s)
(2) Seat adjusters failed
(3) Seat back folding locks or "seat back" failed specify: _____
(4) Seat tracks/anchors failed
(5) Deformed by impact of occupant
(6) Deformed by passenger compartment intrusion (specify): _____
(7) Combination of above (specify): _____
(8) Other (specify): _____
(9) Unknown

Seat Orientation (this Occupant Position)

(0) Occupant not seated or no seat
(1) Forward facing seat
(2) Rear facing seat
(3) Side facing seat (inward)
(4) Side facing seat (outward)
(8) Other (specify): _____
(9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No [✓] Yes [ ]

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection
(1) Complete ejection
(2) Partial ejection
(3) Ejection, Unknown degree
(9) Unknown

Ejection Area
(1) Windshield
(2) Left front
(3) Right front
(4) Left rear
(5) Right rear
(6) Rear
(7) Roof
(8) Other area (e.g., back of pickup, etc.) (specify): _____
(9) Unknown

Ejection Medium
(1) Door/hatch/tailgate
(2) Nonfixed roof structure
(3) Fixed glazing
(4) Nonfixed glazing (specify): _____
(5) Integral structure
(8) Other medium (specify): _____
(9) Unknown

Medium Status (Immediately Prior to Impact)
(1) Open
(2) Closed
(3) Integral structure
(9) Unknown

ENTRAPMENT No [✓] Yes [ ]

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT ASSESSMENT FORM

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 94-14
3. Vehicle Number 01
4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 64
   Code actual age at time of accident.
   (00) Less than one year old (specify by month): _____
   (97) 97 years and older
   (99) Unknown

6. Occupant's Sex 1
   (1) Male
   (2) Female-not reported pregnant
   (3) Female-pregnant-1st trimester(1st-3rd month)
   (4) Female-pregnant-2nd trimester(4th-6th month)
   (5) Female-pregnant-3rd trimester(7th-9th month)
   (6) Female-pregnant-term unknown
   (9) Unknown

7. Occupant's Height 999
   Code actual height to the nearest centimeter.
   (999) Unknown

   ___ ___ inches X 2.54 = ___ ___ ___ centimeters

8. Occupant's Weight 999
   Code actual weight to the nearest kilogram.
   (999) Unknown

   ___ ___ ___ pounds X .4536 = ___ ___ ___ kilograms

9. Occupant's Role 1
   (1) Driver
   (2) Passenger
   (9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position 11
    Front Seat
    (11) Left side
    (12) Middle
    (13) Right side
    (14) Other (specify): _____
    (15) On or in the lap of another occupant

    Second Seat
    (21) Left side
    (22) Middle
    (23) Right side
    (24) Other (specify): _____
    (25) On or in the lap of another occupant

    Third Seat
    (31) Left side
    (32) Middle
    (33) Right side
    (34) Other (specify): _____
    (35) On or in the lap of another occupant

    Fourth Seat
    (41) Left side
    (42) Middle
    (43) Right side
    (44) Other (specify): _____
    (45) On or in the lap of another occupant

    (97) In or on unenclosed area
    (98) Other seat (specify): _____
    (99) Unknown

11. Occupant's Posture 0
    (0) Normal posture

    Abnormal posture
    (1) Kneeling or standing on seat
    (2) Lying on or across seat
    (3) Kneeling, standing or sitting in front of seat
    (4) Sitting sideways or turned to talk with another occupant or to look out a rear window
    (5) Sitting on a console
    (6) Lying back in a reclined seat position
    (7) Bracing with feet or hands on a surface in front of seat
    (8) Other abnormal posture (specify): _____
    (9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0
    (0) No ejection
    (1) Complete ejection
    (2) Partial ejection
    (3) Ejection, unknown degree
    (9) Unknown

13. Ejection Area 0
    (0) No ejection
    (1) Windshield
    (2) Left front
    (3) Right front
    (4) Left rear
    (5) Right rear
    (6) Rear
    (7) Roof
    (8) Other area (e.g., back of pickup, etc.) (specify):_____
    (9) Unknown

14. Ejection Medium 0
    (0) No ejection
    (1) Door/hatch/tailgate
    (2) Nonfixed roof structure
    (3) Fixed glazing
    (4) Nonfixed glazing (specify):
    _____
    (5) Integral structure
    (8) Other medium (specify):
    _____
    (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0
    (0) No ejection
    (1) Open
    (2) Closed
    (3) Integral structure
    (9) Unknown

16. Entrapment 0
    (0) Not entrapped/exit not inhibited
    (1) Entrapped/pinned - mechanically restrained
    (2) Could not exit vehicle due to jammed doors, fire, etc.
    (specify):_____
    _____
    (9) Unknown

17. Occupant Mobility 4
    (0) Occupant fatal before removed from vehicle
    (1) Removed from vehicle while unconscious or not oriented to time or place
    (2) Removed from vehicle due to perceived serious injuries
    (3) Exited vehicle with some assistance
    (4) Exited vehicle under own power
    (5) Occupant fully ejected
    (8) Removed from vehicle for other reasons (specify): _____
    (9) Unknown

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability — 4
(0) None available
(1) Belt removed/destroyed
(2) Shoulder belt
(3) Lap belt
(4) Lap and shoulder belt
(5) Belt available—type unknown

Integral Belt Partially Destroyed
(6) Shoulder belt (lap belt destroyed/removed)
(7) Lap belt (shoulder belt destroyed/removed)
(8) Other belt (specify): _____
(9) Unknown

19. Manual (Active) Belt System Use — 04
(00) None used, not available, or belt removed/destroyed
(01) Inoperative (specify): _____
(02) Shoulder belt
(03) Lap belt
(04) Lap and shoulder belt
(05) Belt used—type unknown
(08) Other belt used (specify): _____
(12) Shoulder belt used with child safety seat
(13) Lap belt used with child safety seat
(14) Lap and shoulder belt used with child safety seat
(15) Belt used with child safety seat—type unknown
(18) Other belt used with child safety seat (specify): _____
(99) Unknown if belt used

20. Proper Use of Manual (Active) Belts — 1
(0) None used or not available
(1) Belt used properly
(2) Belt used properly with child safety seat

Belt Used Improperly
(3) Shoulder belt worn under arm
(4) Shoulder belt worn behind back or seat
(5) Belt worn around more than one person
(6) Lap belt worn on abdomen
(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of manual belt system (specify): _____
(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident — 1
(0) No manual belt used or not available
(1) No manual belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify): _____
(8) Other manual belt failure (specify): _____
(9) Unknown

22. Manual Shoulder Belt Upper Anchorage Adjustment — 2
(0) No manual shoulder belt
(1) No upper anchorage adjustment for manual shoulder belt

Adjustable shoulder Belt Upper Anchorage
(2) In full up position
(3) In mid position
(4) In full down position
(5) Position unknown
(9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/ Function — 0
(0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional
(4) Automatic belts destroyed or rendered inoperative
(9) Unknown

24. Automatic (Passive) Belt System Use — 0
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
(3) Automatic belt use unknown
(9) Unknown

25. Automatic (Passive) Belt System Type — 0
(0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

26. Proper Use of Automatic (Passive) Belt System — 0
(0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly
(3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of automatic belt system (specify): _____
(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident — 0
(0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify):
(8) Other automatic belt failure (specify): _____
(9) Unknown

POLICE REPORTED RESTRAINT USE

28. Police Reported Belt Use 5
    (0) None used
    (1) Police did not indicate belt use
    (2) Shoulder belt
    (3) Lap belt
    (4) Lap and shoulder belt
    (5) Belt used, type not specified
    (6) Child safety seat
    (7) Automatic belt
    (8) Other type belt, (specify):

    _____
    (9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 2
    (0) No air bag available
    (1) Police did not indicate air bag availability/function
    (2) Deployed
    (3) Not deployed
    (4) Unknown if deployed
    (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

[✓] Vehicle inspection
[ ] Official injury data
[ ] Driver/occupant interview
[ ] Other (specify):

_____

[ ] Unknown if belt used

AIR BAG SYSTEM FUNCTION

30. Frontal Air Bag System Availability/Function (This Occupant Position) 1
    (0) Not equipped/not available
    (1) Air bag

    Non-functional
    (2) Air bag disconnected (specify):

    _____
    (3) Air bag not reinstalled
    (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 1
    (0) Not equipped/not available
    (1) Deployed during accident (as a result of impact)
    (2) Deployed inadvertently just prior to accident
    (3) Deployed, details unknown
    (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
    (5) Unknown if deployed
    (7) Nondeployed
    (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0
    (0) Not equipped/not available
    (1) Air bag

    Non-functional
    (2) Air bag disconnected (specify):

    _____
    (3) Air bag not reinstalled
    (9) Unknown

    Specify type of "other" air bag present:

    _____

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0
    (0) Not equipped with an "other" air bag
    (1) Deployed during accident (as a result of impact)
    (2) Deployed inadvertently just prior to accident
    (3) Deployed, details unknown
    (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
    (5) Unknown if deployed
    (7) Nondeployed
    (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 1
    (0) Not equipped/not available
    (1) No
    (2) Yes (specify):

    _____
    (9) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 1
(0) Not equipped/not available
(1) No previous accidents

Yes
(2) Previous accident(s) without deployment(s)
(3) One previous accident with deployment
(4) More than one previous accident with at least one deployment
(8) Previous accidents, unknown deployment status
(9) Unknown

36. Type of Air Bag 1
(0) Not equipped/not available
(1) Original manufacturer installed system
(2) Retrofitted air bag
(3) Replacement air bag
(8) Unknown type of air bag
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 1
(0) Not equipped/not available
(1) No prior maintenance
(2) Yes, prior maintenance (specify): _____
(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 01
(00) Not equipped/not available
_____ Code the accident event sequence number that initiated the air bag deployment
(96) Deployed, unknown event
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

39. CDC For Air Bag Deployment Impact 1
(0) Not equipped/not available
(1) Highest delta V
(2) Second highest delta V
(3) Other non-coded delta V (specify): _____
(6) Deployed, unknown event
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact +0016
(_000) Not equipped/not available
Code the value of the delta V for the impact that initiated the air bag deployment
(_996) Deployment, unknown longitudinal Delta V
(_997) Not deployed
(_998) Unknown if deployed
(_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 2
(0) Not equipped/not available
(1) No
(2) Yes
(3) Deployed, unknown if flap(s) opened at designated tear points
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 1
(0) Not equipped/not available
(1) No
(2) Yes (specify): _____
(3) Deployed, unknown if air bag module cover flap(s) damaged
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

43. Was There Damage To The Air Bag? 01
(00) Not equipped/not available
(01) Not damaged

Yes - Air Bag Damage
(02) Ruptured
(03) Cut
(04) Torn
(05) Holed
(06) Burned
(07) Abraded
(88) Other damage (specify): _____
(95) Damaged, details unknown
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION *continued*

44. Source of Air Bag Damage 01
(00) Not equipped/not available
(01) Not damaged
(02) Object worn by occupant, (specify):
(03) Object carried by occupant, (specify):
(04) Adaptive/assistive controls, (specify):
(05) Fire in vehicle
(06) Thermal burns
(07) Rescue or emergency efforts
(88) Other damage source (specify):
(95) Damaged, unknown source
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

45. Was The Air Bag Tethered? 1
(0) Not equipped/not available
(1) No
(2) Yes (specify number of tether straps):
(3) Deployed, unknown if tethered
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

46. Did The Air Bag Have Vent Ports? 2
(0) Not equipped/not available
(1) No
(2) Yes (specify number of vent ports): 2
(3) Deployed, unknown if vent ports present
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 1
(0) Not equipped/not available
(1) No
(2) Yes (specify):
(3) Deployed, unknown if other occupant contact to air bag
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

48. Was This Occupant Wearing Eye-wear? 9
(0) Not air bag equipped/air bag not available
(1) No
(2) Eyeglasses/sunglasses
(3) Contact lenses
(4) Deployed, unknown if eyewear worn
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3
(0) No head restraints
(1) Integral—no damage
(2) Integral—damaged during accident
(3) Adjustable—no damage
(4) Adjustable—damaged during accident
(5) Add-on—no damage
(6) Add-on—damaged during accident
(8) Other (specify):
(9) Unknown

50. Seat Type (this Occupant Position) 06
(00) Occupant not seated or no seat
(01) Bucket
(02) Bucket with folding back
(03) Bench
(04) Bench with separate back cushions
(05) Bench with folding back(s)
(06) Split bench with separate back cushions
(07) Split bench with folding back(s)
(08) Pedestal (i.e., column supported)
(09) Box mounted seat (i.e., van type)
(10) Other seat type (specify):
(99) Unknown

51. Seat Orientation (this Occupant Position) 1
(0) Occupant not seated or no seat
(1) Forward facing seat
(2) Rear facing seat
(3) Side facing seat (inward)
(4) Side facing seat (outward)
(8) Other (specify):
(9) Unknown

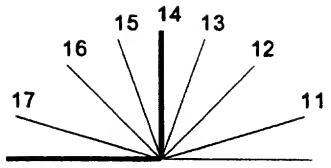
52. Seat Track Adjusted Position Prior To Impact 6
(0) Occupant not seated or no seat
(1) Non-adjustable seat track

Adjustable Seat Track
(2) Seat at forward most track position
(3) Seat between forward most and middle track positions
(4) Seat at middle track position
(5) Seat between middle and rear most track positions
(6) Seat at rear most track position
(9) Unknown

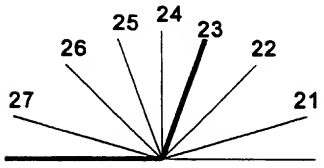
HEAD RESTRAINT AND SEAT EVALUATION *continued*

53. Seat Back Incline Prior and Post Impact 23
    (00) Occupant not seated or no seat
    (01) Not adjustable

Upright prior to impact
    (11) Moved to completely rearward position
    (12) Moved to rearward midrange position
    (13) Moved to slightly rearward position
    (14) Retained pre-impact position
    (15) Moved to slightly forward position
    (16) Moved to forward midrange position
    (17) Moved to completely forward position

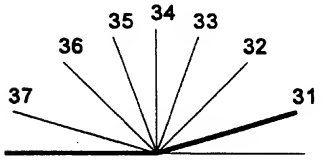


Slightly reclined prior to impact
    (21) Moved to completely rearward position
    (22) Moved to rearward midrange position
    (23) Retained pre-impact position
    (24) Moved to upright position
    (25) Moved to slightly forward position
    (26) Moved to forward midrange position
    (27) Moved to completely forward position



Completely reclined prior to impact
    (31) Retained pre-impact position
    (32) Moved to rearward midrange position
    (33) Moved to slightly rearward position
    (34) Moved to upright position
    (35) Moved to slightly forward position
    (36) Moved to forward midrange position
    (37) Moved to completely forward position

    (99) Unknown



54. Seat Performance (this Occupant Position) 1
    (0) Occupant not seated or no seat
    (1) No seat performance failure(s)
    (2) Seat adjusters failed
    (3) Seat back folding locks or "seat back" failed (specify):_____
    (4) Seat track/anchors failed
    (5) Deformed by impact of occupant
    (6) Deformed by passenger compartment intrusion, (specify):_____
    _____
    (7) Combination of above (specify):
    _____
    (8) Other (specify): _____
    (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0
(000) No child safety seat
Applicable codes are found in your NASS CDS Data Collection, Coding and Editing
(950) Built-in child safety seat
(997) Other make/model (specify):
_____
(998) Unknown make/model
(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0
(0) No child safety seat
(1) Infant seat
(2) Toddler seat
(3) Convertible seat
(4) Booster seat - with shield
(5) Booster seat - without shield
(7) Other type child safety seat (specify):
_____
(8) Unknown child safety seat type
(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0
(00) No child safety seat

Designed for Rear Facing for This Age/Weight
(01) Rear facing
(02) Forward facing
(08) Other orientation (specify):
_____
(09) Unknown orientation

Designed For Forward Facing for This Age/Weight
(11) Rear facing
(12) Forward facing
(18) Other orientation (specify):
_____
(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
(21) Rear facing
(22) Forward facing
(28) Other orientation (specify):
_____
(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 0

59. Child Safety Seat Shield Usage 0 0

60. Child Safety Seat Tether Usage 0 0

Note: Options below applicable to Variables OA58-OA60.
(00) No child safety seat

Not Designed With Harness/Shield/Tether
(01) After market harness/shield/tether added, not used
(02) After market harness/shield/tether used
(03) Child safety seat used, but no after market harness/shield/tether added
(09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether
(11) Harness/shield/tether not used
(12) Harness/shield/tether used
(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether
(21) Harness/shield/tether not used
(22) Harness/shield/tether used
(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES

61. Injury Severity (Police Rating) 1

(0) O - No injury
(1) C - Possible injury
(2) B - Nonincapacitating injury
(3) A - Incapacitating injury
(4) K - Killed
(5) U - Injury, severity unknown
(6) Died prior to accident
(9) Unknown

62. Treatment - Mortality 0
(0) No treatment
(1) Fatal
(2) Fatal - ruled disease (specify):

_____

Nonfatal
(3) Hospitalization
(4) Transported and released
(5) Treatment at scene - nontransported
(6) Treatment later
(7) Treatment - other (specify):

_____

(8) Transported to a medical facility-unknown if treated
(9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 0
(0) Not treated at a medical facility
(1) Trauma center
(2) Hospital
(3) Medical clinic
(4) Physician's office
(5) Treatment later at medical facility
(8) Other (specify):

_____

(9) Unknown

64. Hospital Stay 00
(00) Not Hospitalized
____Code the number of days (up through 60) that the occupant stayed in hospital.
(61) 61 days or more
(99) Unknown

65. Working Days Lost 99
____Code the number of days (up through 60) that the occupant lost from work due to the accident
(00) No working days lost
(61) 61 days or more
(62) Fatally injured
(97) Not working prior to accident
(99) Unknown

STOP WORK HERE

VARIABLES 66-74

TO BE CODED BY THE ZONE CENTER

TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES

66. Time to Death 0 0
____Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 +n up through 30 days = 60)
(00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

67. 1st Medically Reported Cause of Death 0 0

68. 2nd Medically Reported Cause of Death 0 0

69. 3rd Medically Reported Cause of Death 0 0
____Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
(00) Not fatal or no additional causes
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):
_____
(97) Other result (includes fatal ruled disease) (specify):
_____
(99) Unknown

70. Number of Recorded Injuries for This Occupant 0 0
____Code the actual number of injuries recorded for this occupant.
(00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

TRAUMA DATA

71. Glasgow Coma Scale (GCS) Score (at Medical Facility) 0 0
(00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

72. Was the Occupant Given Blood? 1
(1) No - blood not given
(2) Yes - blood given
(specify units):_____
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) – HCO_3 0 0
(00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO_3
(96) ABGs reported , HCO_3 unknown
(97) Injured, details unknown
(99) Unknown if injured

BELT USE DETERMINATION

74. Primary Source of Belt Use Determination 1
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Vehicle inspection
(2) Official injury data
(3) Driver/occupant interview
(8) Other (specify):_____
(9) Unknown if belt used

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~		3. Vehicle Number	01
2. Case Number - ~~Stratum~~	94-14	4. Occupant Number	01

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	A.I.S. - 90 Body Region	A.I.S. - 90 Type of Anatomic Structure	A.I.S. - 90 Specific Anatomic Structure	A.I.S. - 90 Level of Injury	A.I.S. - 90 A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
1st	5. 0	6. 0	7. 0	8. 00	9. 00	10. 0	11. 0	12. 000	13. 0	14. 0	15. 00
2nd	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.
3rd	27.	28.	29.	30.	31.	32.	33.	34.	35.	36.	37.
4th	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.	48.
5th	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.
6th	60.	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.
7th	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.	81.
8th	82.	83.	84.	85.	86.	87.	88.	89.	90.	91.	92.
9th	93.	94.	95.	96.	97.	98.	99.	100.	101.	102.	103.
10th	104.	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.

OCCUPANT INJURY DATA

	Source of Injury Data	A.I.S. - 90 Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th											
12th											
13th											
14th											
15th											
16th											
17th											
18th											
19th											
20th											
21st											
22nd											
23rd											
24th											
25th											

OCCUPANT INJURY CLASSIFICATION

Body Region

(1) Head
(2) Face
(3) Neck
(4) Thorax
(5) Abdomen
(6) Spine
(7) Upper Extremity
(8) Lower Extremity
(9) Unspecified

Type of Anatomic Structure

(1) Whole Area
(2) Vessels
(3) Nerves
(4) Organs (includes Muscles/ligaments)
(5) Skeletal (includes joints)
(6) Head - LOC
(9) Skin

Specific Anatomic Structure

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

Whole Area
(02) Skin - Abrasion
(04) Skin - Contusion
(06) Skin - Laceration
(08) Skin - Avulsion
(10) Amputation
(20) Burn
(30) Crush
(40) Degloving
(50) Injury - NFS
(90) Trauma, other than mechanical

Head - LOC
(02) Length of LOC

(04) Level
(06) of
(08) Consciousness

(10) Concussion

Spine
(02) Cervical
(04) Thoracic
(06) Lumbar

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

(1) Minor Injury
(2) Moderate Injury
(3) Serious Injury
(4) Severe Injury
(5) Critical Injury
(6) Maximum (untreatable)
(7) Injured, unknown severity

Aspect

(1) Right
(2) Left
(3) Bilateral
(4) Central
(5) Anterior
(6) Posterior
(7) Superior
(8) Inferior
(9) Unknown
(0) Whole region

SOURCE OF INJURY DATA

OFFICIAL RECORDS
(1) Autopsy records with or without hospital/medical records
(2) Hospital/medical records other than emergency room (e.g., discharge summary)
(3) Emergency room records only (including associated X-rays or other lab reports)
(4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS
(5) Lay coroner report
(6) E.M.S. personnel
(7) Interviewee
(8) Other source (specify):

(9) Police

INJURY SOURCE CONFIDENCE LEVEL

(1) Certain
(2) Probable
(3) Possible
(9) Unknown

DIRECT/INDIRECT INJURY

(1) Direct contact injury
(2) Indirect contact injury
(3) Noncontact injury
(7) Injured, unknown source

INJURY SOURCES

FRONT
(001) Windshield
(002) Mirror
(003) Sunvisor
(004) Steering wheel rim
(005) Steering wheel hub/spoke
(006) Steering wheel (combination of codes 004 and 005)
(007) Steering column, transmission selector lever, other attachment
(008) Cellular telephone or CB radio
(009) Add on equipment (e.g., tape deck, air conditioner)
(010) Left instrument panel and below
(011) Center instrument panel and below
(012) Right instrument panel and below
(013) Glove compartment door
(014) Knee bolster
(015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
(016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
(017) Windshield reinforced by exterior object (specify)

_____

(019) Other front object (specify):

_____

LEFT SIDE
(051) Left side interior surface, excluding hardware or armrests
(052) Left side hardware or armrest
(053) Left A (A1/A2)-pillar
(054) Left B-pillar
(055) Other left pillar (specify):

_____

(056) Left side window glass
(057) Left side window frame
(058) Left side window sill
(059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(060) Other left side object (specify):

_____

RIGHT SIDE
(101) Right side interior surface, excluding hardware or armrests
(102) Right side hardware or armrest
(103) Right A (A1/A2)-pillar
(104) Right B-pillar
(105) Other right pillar (specify):

_____

(106) Right side window glass
(107) Right side window frame
(108) Right side window sill
(109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(110) Other right side object (specify):

_____

INTERIOR
(151) Seat, back support
(152) Belt restraint webbing/buckle
(153) Belt restraint B-pillar or door frame attachment point
(154) Other restraint system component (specify):

_____

(155) Head restraint system
(160) Other occupants (specify):

_____

(161) Interior loose objects
(162) Child safety seat (specify):

_____

(163) Other interior object (specify):

_____

AIR BAG
(170) Air bag-driver side
(171) Air bag-driver side and eyewear
(172) Air bag-driver side and jewelry
(173) Air bag-driver side and object held
(174) Air bag-driver side and object in mouth
(175) Air bag compartment cover-driver side
(176) Air bag compartment cover-driver side and eyewear
(177) Air bag compartment cover-driver side and jewelry
(178) Air bag compartment cover-driver side and object held
(179) Air bag compartment cover-driver side and object in mouth
(180) Air bag-passenger side
(181) Air bag-passenger side and eyewear
(182) Air bag-passenger side and jewelry
(183) Air bag-passenger side and object held
(184) Air bag-passenger side and object in mouth
(185) Air bag compartment cover-passenger side
(186) Air bag compartment cover-passenger side and eyewear
(187) Air bag compartment cover-passenger side and jewelry
(188) Air bag compartment cover-passenger side and object held
(189) Air bag compartment cover-passenger side and object in mouth
(190) Other air bag (specify)

_____

(195) Other air bag compartment cover (specify)

_____

ROOF
(201) Front header
(202) Rear header
(203) Roof left side rail
(204) Roof right side rail
(205) Roof or convertible top

FLOOR
(251) Floor (including toe pan)
(252) Floor or console mounted transmission lever, including console
(253) Parking brake handle
(254) Foot controls including parking brake

REAR
(301) Backlight (rear window)
(302) Backlight storage rack, door, etc.
(303) Other rear object (specify):

_____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT
(401) Hand controls for braking/acceleration
(402) Steering control devices (attached to OEM steering wheel)
(403) Steering knob attached to steering wheel
(405) Replacement steering wheel (i.e., reduced diameter)
(406) Joy stick steering controls
(407) Wheelchair tie-downs
(408) Modification to seat belts, (specify): _____
(409) Additional or relocated switches, (specify):

_____

(410) Raised roof
(411) Wall mounted head rest (used behind wheel chair)
(412) Other adaptive device (specify):_____

_____

EXTERIOR of OCCUPANT'S VEHICLE
(451) Hood
(452) Outside hardware (e.g., outside mirror, antenna)
(453) Other exterior surface or tires (specify):

_____

_____

(454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE
(501) Front bumper
(502) Hood edge
(503) Other front of vehicle (specify):

_____

(504) Hood
(505) Hood ornament
(506) Windshield, roof rail, A-pillar
(507) Side surface
(508) Side mirrors
(509) Other side protrusions (specify):

_____

(510) Rear surface
(511) Undercarriage
(512) Tires and wheels
(513) Other exterior of other motor vehicle (specify): _____

_____

(514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT
(551) Ground
(598) Other vehicle or object (specify):

_____

(599) Unknown vehicle or object

NONCONTACT INJURY
(601) Fire in vehicle
(602) Flying glass
(603) Other noncontact injury source (specify): _____
(604) Air bag exhaust gases
(697) Injured, unknown source

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT ASSESSMENT FORM

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 94-14
3. Vehicle Number 01
4. Occupant Number 02

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 65
   Code actual age at time of accident.
   (00) Less than one year old (specify by month): _____
   (97) 97 years and older
   (99) Unknown

6. Occupant's Sex 2
   (1) Male
   (2) Female-not reported pregnant
   (3) Female-pregnant-1st trimester(1st-3rd month)
   (4) Female-pregnant-2nd trimester(4th-6th month)
   (5) Female-pregnant-3rd trimester(7th-9th month)
   (6) Female-pregnant-term unknown
   (9) Unknown

7. Occupant's Height 175
   Code actual height to the nearest centimeter.
   (999) Unknown

   69 inches X 2.54 = 175 centimeters

8. Occupant's Weight 999
   Code actual weight to the nearest kilogram.
   (999) Unknown

   ___ pounds X .4536 = ___ kilograms

9. Occupant's Role 1
   (1) Driver
   (2) Passenger
   (9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position 13
    Front Seat
    (11) Left side
    (12) Middle
    (13) Right side
    (14) Other (specify): _____
    (15) On or in the lap of another occupant

    Second Seat
    (21) Left side
    (22) Middle
    (23) Right side
    (24) Other (specify): _____
    (25) On or in the lap of another occupant

    Third Seat
    (31) Left side
    (32) Middle
    (33) Right side
    (34) Other (specify): _____
    (35) On or in the lap of another occupant

    Fourth Seat
    (41) Left side
    (42) Middle
    (43) Right side
    (44) Other (specify): _____
    (45) On or in the lap of another occupant

    (97) In or on unenclosed area
    (98) Other seat (specify): _____
    (99) Unknown

11. Occupant's Posture 0
    (0) Normal posture

    Abnormal posture
    (1) Kneeling or standing on seat
    (2) Lying on or across seat
    (3) Kneeling, standing or sitting in front of seat
    (4) Sitting sideways or turned to talk with another occupant or to look out a rear window
    (5) Sitting on a console
    (6) Lying back in a reclined seat position
    (7) Bracing with feet or hands on a surface in front of seat
    (8) Other abnormal posture (specify): _____
    (9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0
    (0) No ejection
    (1) Complete ejection
    (2) Partial ejection
    (3) Ejection, unknown degree
    (9) Unknown

13. Ejection Area 0
    (0) No ejection
    (1) Windshield
    (2) Left front
    (3) Right front
    (4) Left rear
    (5) Right rear
    (6) Rear
    (7) Roof
    (8) Other area (e.g., back of pickup, etc.) (specify):_____
    (9) Unknown

14. Ejection Medium 0
    (0) No ejection
    (1) Door/hatch/tailgate
    (2) Nonfixed roof structure
    (3) Fixed glazing
    (4) Nonfixed glazing (specify):
    _____
    (5) Integral structure
    (8) Other medium (specify):
    _____
    (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0
    (0) No ejection
    (1) Open
    (2) Closed
    (3) Integral structure
    (9) Unknown

16. Entrapment 0
    (0) Not entrapped/exit not inhibited
    (1) Entrapped/pinned - mechanically restrained
    (2) Could not exit vehicle due to jammed doors, fire, etc.
    (specify):_____
    _____
    (9) Unknown

17. Occupant Mobility 3
    (0) Occupant fatal before removed from vehicle
    (1) Removed from vehicle while unconscious or not oriented to time or place
    (2) Removed from vehicle due to perceived serious injuries
    (3) Exited vehicle with some assistance
    (4) Exited vehicle under own power
    (5) Occupant fully ejected
    (8) Removed from vehicle for other reasons (specify): _____
    (9) Unknown

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4
(0) None available
(1) Belt removed/destroyed
(2) Shoulder belt
(3) Lap belt
(4) Lap and shoulder belt
(5) Belt available—type unknown

Integral Belt Partially Destroyed
(6) Shoulder belt (lap belt destroyed/removed)
(7) Lap belt (shoulder belt destroyed/removed)
(8) Other belt (specify): _____
(9) Unknown

19. Manual (Active) Belt System Use 04
(00) None used, not available, or belt removed/destroyed
(01) Inoperative (specify): _____
(02) Shoulder belt
(03) Lap belt
(04) Lap and shoulder belt
(05) Belt used—type unknown
(08) Other belt used (specify): _____
(12) Shoulder belt used with child safety seat
(13) Lap belt used with child safety seat
(14) Lap and shoulder belt used with child safety seat
(15) Belt used with child safety seat—type unknown
(18) Other belt used with child safety seat (specify): _____
(99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 1
(0) None used or not available
(1) Belt used properly
(2) Belt used properly with child safety seat

Belt Used Improperly
(3) Shoulder belt worn under arm
(4) Shoulder belt worn behind back or seat
(5) Belt worn around more than one person
(6) Lap belt worn on abdomen
(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of manual belt system (specify): _____
(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 1
(0) No manual belt used or not available
(1) No manual belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify): _____
(8) Other manual belt failure (specify): _____
(9) Unknown

22. Manual Shoulder Belt Upper Anchorage Adjustment 2
(0) No manual shoulder belt
(1) No upper anchorage adjustment for manual shoulder belt

Adjustable shoulder Belt Upper Anchorage
(2) In full up position
(3) In mid position
(4) In full down position
(5) Position unknown
(9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/ Function 0
(0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional
(4) Automatic belts destroyed or rendered inoperative
(9) Unknown

24. Automatic (Passive) Belt System Use 0
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
(3) Automatic belt use unknown
(9) Unknown

25. Automatic (Passive) Belt System Type 0
(0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0
(0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly
(3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of automatic belt system (specify): _____
(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0
(0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify):
(8) Other automatic belt failure (specify): _____
(9) Unknown

POLICE REPORTED RESTRAINT USE

28. Police Reported Belt Use 5
    (0) None used
    (1) Police did not indicate belt use
    (2) Shoulder belt
    (3) Lap belt
    (4) Lap and shoulder belt
    (5) Belt used, type not specified
    (6) Child safety seat
    (7) Automatic belt
    (8) Other type belt, (specify):

    _____

    (9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 2
    (0) No air bag available
    (1) Police did not indicate air bag availability/function
    (2) Deployed
    (3) Not deployed
    (4) Unknown if deployed
    (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

[ ] Vehicle inspection
[ ] Official injury data
[ ] Driver/occupant interview
[ ] Other (specify):

    _____

[ ] Unknown if belt used

_____

_____

_____

_____

AIR BAG SYSTEM FUNCTION

30. Frontal Air Bag System Availability/Function (This Occupant Position) 1
    (0) Not equipped/not available
    (1) Air bag

    Non-functional
    (2) Air bag disconnected (specify):

    _____

    (3) Air bag not reinstalled
    (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 1
    (0) Not equipped/not available
    (1) Deployed during accident (as a result of impact)
    (2) Deployed inadvertently just prior to accident
    (3) Deployed, details unknown
    (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
    (5) Unknown if deployed
    (7) Nondeployed
    (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0
    (0) Not equipped/not available
    (1) Air bag

    Non-functional
    (2) Air bag disconnected (specify):

    _____

    (3) Air bag not reinstalled
    (9) Unknown

    Specify type of "other" air bag present:

    _____

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0
    (0) Not equipped with an "other" air bag
    (1) Deployed during accident (as a result of impact)
    (2) Deployed inadvertently just prior to accident
    (3) Deployed, details unknown
    (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
    (5) Unknown if deployed
    (7) Nondeployed
    (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 1
    (0) Not equipped/not available
    (1) No
    (2) Yes (specify):

    _____

    (9) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 1
- (0) Not equipped/not available
- (1) No previous accidents

Yes
- (2) Previous accident(s) without deployment(s)
- (3) One previous accident with deployment
- (4) More than one previous accident with at least one deployment
- (8) Previous accidents, unknown deployment status
- (9) Unknown

36. Type of Air Bag 1
- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 1
- (0) Not equipped/not available
- (1) No prior maintenance
- (2) Yes, prior maintenance (specify): _____
- (9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 01
- (00) Not equipped/not available
- _____ Code the accident event sequence number that initiated the air bag deployment
- (96) Deployed, unknown event
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

39. CDC For Air Bag Deployment Impact 1
- (0) Not equipped/not available
- (1) Highest delta V
- (2) Second highest delta V
- (3) Other non-coded delta V (specify): _____
- (6) Deployed, unknown event
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact +0016
- (_000) Not equipped/not available
  Code the value of the delta V for the impact that initiated the air bag deployment
- (_996) Deployment, unknown longitudinal Delta V
- (_997) Not deployed
- (_998) Unknown if deployed
- (_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 2
- (0) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 2
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): Deformed | abraded
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

43. Was There Damage To The Air Bag? 01
- (00) Not equipped/not available
- (01) Not damaged

Yes - Air Bag Damage
- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed
- (06) Burned
- (07) Abraded
- (88) Other damage (specify): _____
- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION *continued*

44. Source of Air Bag Damage 01
(00) Not equipped/not available
(01) Not damaged
(02) Object worn by occupant, (specify):
(03) Object carried by occupant, (specify):
(04) Adaptive/assistive controls, (specify):
(05) Fire in vehicle
(06) Thermal burns
(07) Rescue or emergency efforts
(88) Other damage source (specify):
(95) Damaged, unknown source
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

45. Was The Air Bag Tethered? 2
(0) Not equipped/not available
(1) No
(2) Yes (specify number of tether straps): 2
(3) Deployed, unknown if tethered
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

46. Did The Air Bag Have Vent Ports? 2
(0) Not equipped/not available
(1) No
(2) Yes (specify number of vent ports): 2 side ports
(3) Deployed, unknown if vent ports present
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 1
(0) Not equipped/not available
(1) No
(2) Yes (specify):
(3) Deployed, unknown if other occupant contact to air bag
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

48. Was This Occupant Wearing Eye-wear? 9
(0) Not air bag equipped/air bag not available
(1) No
(2) Eyeglasses/sunglasses
(3) Contact lenses
(4) Deployed, unknown if eyewear worn
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3
(0) No head restraints
(1) Integral—no damage
(2) Integral—damaged during accident
(3) Adjustable—no damage
(4) Adjustable—damaged during accident
(5) Add-on—no damage
(6) Add-on—damaged during accident
(8) Other (specify):
(9) Unknown

50. Seat Type (this Occupant Position) 06
(00) Occupant not seated or no seat
(01) Bucket
(02) Bucket with folding back
(03) Bench
(04) Bench with separate back cushions
(05) Bench with folding back(s)
(06) Split bench with separate back cushions
(07) Split bench with folding back(s)
(08) Pedestal (i.e., column supported)
(09) Box mounted seat (i.e., van type)
(10) Other seat type (specify):
(99) Unknown

51. Seat Orientation (this Occupant Position) 1
(0) Occupant not seated or no seat
(1) Forward facing seat
(2) Rear facing seat
(3) Side facing seat (inward)
(4) Side facing seat (outward)
(8) Other (specify):
(9) Unknown

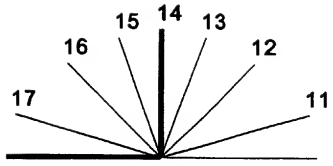
52. Seat Track Adjusted Position Prior To Impact 6
(0) Occupant not seated or no seat
(1) Non-adjustable seat track

Adjustable Seat Track
(2) Seat at forward most track position
(3) Seat between forward most and middle track positions
(4) Seat at middle track position
(5) Seat between middle and rear most track positions
(6) Seat at rear most track position
(9) Unknown

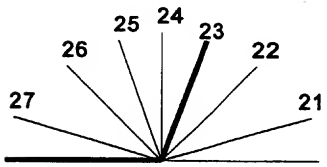
HEAD RESTRAINT AND SEAT EVALUATION *continued*

53. Seat Back Incline Prior and Post Impact 23
    (00) Occupant not seated or no seat
    (01) Not adjustable

Upright prior to impact
    (11) Moved to completely rearward position
    (12) Moved to rearward midrange position
    (13) Moved to slightly rearward position
    (14) Retained pre-impact position
    (15) Moved to slightly forward position
    (16) Moved to forward midrange position
    (17) Moved to completely forward position

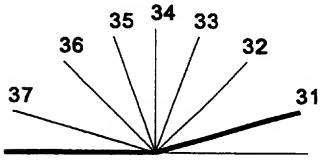


Slightly reclined prior to impact
    (21) Moved to completely rearward position
    (22) Moved to rearward midrange position
    (23) Retained pre-impact position
    (24) Moved to upright position
    (25) Moved to slightly forward position
    (26) Moved to forward midrange position
    (27) Moved to completely forward position



Completely reclined prior to impact
    (31) Retained pre-impact position
    (32) Moved to rearward midrange position
    (33) Moved to slightly rearward position
    (34) Moved to upright position
    (35) Moved to slightly forward position
    (36) Moved to forward midrange position
    (37) Moved to completely forward position

    (99) Unknown



54. Seat Performance (this Occupant Position) 1
    (0) Occupant not seated or no seat
    (1) No seat performance failure(s)
    (2) Seat adjusters failed
    (3) Seat back folding locks or "seat back" failed (specify):_____
    (4) Seat track/anchors failed
    (5) Deformed by impact of occupant
    (6) Deformed by passenger compartment intrusion, (specify):_____
    (7) Combination of above (specify):_____
    (8) Other (specify):_____
    (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0
(000) No child safety seat
Applicable codes are found in your NASS CDS Data Collection, Coding and Editing
(950) Built-in child safety seat
(997) Other make/model (specify):
_____
(998) Unknown make/model
(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0
(0) No child safety seat
(1) Infant seat
(2) Toddler seat
(3) Convertible seat
(4) Booster seat - with shield
(5) Booster seat - without shield
(7) Other type child safety seat (specify):
_____
(8) Unknown child safety seat type
(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0
(00) No child safety seat

Designed for Rear Facing for This Age/Weight
(01) Rear facing
(02) Forward facing
(08) Other orientation (specify):
_____
(09) Unknown orientation

Designed For Forward Facing for This Age/Weight
(11) Rear facing
(12) Forward facing
(18) Other orientation (specify):
_____
(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
(21) Rear facing
(22) Forward facing
(28) Other orientation (specify):
_____
(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 0

59. Child Safety Seat Shield Usage 0 0

60. Child Safety Seat Tether Usage 0 0

Note: Options below applicable to Variables OA58-OA60.
(00) No child safety seat

Not Designed With Harness/Shield/Tether
(01) After market harness/shield/tether added, not used
(02) After market harness/shield/tether used
(03) Child safety seat used, but no after market harness/shield/tether added
(09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether
(11) Harness/shield/tether not used
(12) Harness/shield/tether used
(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether
(21) Harness/shield/tether not used
(22) Harness/shield/tether used
(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES

61. Injury Severity (Police Rating) 2

(0) O - No injury
(1) C - Possible injury
(2) B - Nonincapacitating injury
(3) A - Incapacitating injury
(4) K - Killed
(5) U - Injury, severity unknown
(6) Died prior to accident
(9) Unknown

62. Treatment - Mortality 3

(0) No treatment
(1) Fatal
(2) Fatal - ruled disease (specify):

_____

Nonfatal
(3) Hospitalization
(4) Transported and released
(5) Treatment at scene - nontransported
(6) Treatment later
(7) Treatment - other (specify):

_____

(8) Transported to a medical facility-unknown if treated
(9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 2

(0) Not treated at a medical facility
(1) Trauma center
(2) Hospital
(3) Medical clinic
(4) Physician's office
(5) Treatment later at medical facility
(8) Other (specify):

_____

(9) Unknown

64. Hospital Stay 01

(00) Not Hospitalized
____Code the number of days (up through 60) that the occupant stayed in hospital.
(61) 61 days or more
(99) Unknown

65. Working Days Lost 99

____Code the number of days (up through 60) that the occupant lost from work due to the accident
(00) No working days lost
(61) 61 days or more
(62) Fatally injured
(97) Not working prior to accident
(99) Unknown

STOP WORK HERE

VARIABLES 66-74

TO BE CODED BY THE ZONE CENTER

TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES

66. Time to Death **00**
_____Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 +n up through 30 days = 60)
(00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

67. 1st Medically Reported Cause of Death **00**

68. 2nd Medically Reported Cause of Death **00**

69. 3rd Medically Reported Cause of Death **00**
_____Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
(00) Not fatal or no additional causes
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):
_____
(97) Other result (includes fatal ruled disease) (specify):
_____
(99) Unknown

70. Number of Recorded Injuries for This Occupant **06**
_____Code the actual number of injuries recorded for this occupant.
(00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

TRAUMA DATA

71. Glasgow Coma Scale (GCS) Score (at Medical Facility) **97**
(00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

72. Was the Occupant Given Blood? **9**
(1) No - blood not given
(2) Yes - blood given
(specify units):_____
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) – HCO_3 **97**
(00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO_3
(96) ABGs reported , HCO_3 unknown
(97) Injured, details unknown
(99) Unknown if injured

BELT USE DETERMINATION

74. Primary Source of Belt Use Determination **1**
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Vehicle inspection
(2) Official injury data
(3) Driver/occupant interview
(8) Other (specify):_____
(9) Unknown if belt used

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ___	3. Vehicle Number 01
2. Case Number - ~~Stratum~~ 94-14	4. Occupant Number 02

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	A.I.S. - 90 Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
1st	5. 8	6. 7	7. 5	8. 20	9. 02	10. 2	11. 2	12. 185	13. 1	14. 1	15. 00
2nd	16. 8	17. 7	18. 5	19. 20	20. 02	21. 2	22. 2	23. 185	24. 1	25. 1	26. 00
3rd	27. 8	28. 7	29. 5	30. 20	31. 02	32. 2	33. 2	34. 185	35. 1	36. 1	37. 00
4th	38. 8	39. 7	40. 5	41. 24	42. 04	43. 1	44. 1	45. 185	46. 1	47. 1	48. 00
5th	49. 8	50. 7	51. 5	52. 24	53. 04	54. 1	55. 1	56. 185	57. 1	58. 1	59. 00
6th	60. 8	61. 7	62. 9	63. 06	64. 02	65. 1	66. 1	67. 185	68. 1	69. 1	70. 00
7th	71. __	72. __	73. __	74. __	75. __	76. __	77. __	78. ___	79. __	80. __	81. __
8th	82. __	83. __	84. __	85. __	86. __	87. __	88. __	89. ___	90. __	91. __	92. __
9th	93. __	94. __	95. __	96. __	97. __	98. __	99. __	100. ___	101. __	102. __	103. __
10th	104. __	105. __	106. __	107. __	108. __	109. __	110. __	111. ___	112. __	113. __	114. __

OCCUPANT INJURY DATA

	Source of Injury Data	A.I.S. - 90 Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th											
12th											
13th											
14th											
15th											
16th											
17th											
18th											
19th											
20th											
21st											
22nd											
23rd											
24th											
25th											

OCCUPANT INJURY CLASSIFICATION

Body Region

(1) Head
(2) Face
(3) Neck
(4) Thorax
(5) Abdomen
(6) Spine
(7) Upper Extremity
(8) Lower Extremity
(9) Unspecified

Type of Anatomic Structure

(1) Whole Area
(2) Vessels
(3) Nerves
(4) Organs (includes Muscles/ligaments)
(5) Skeletal (includes joints)
(6) Head - LOC
(9) Skin

Specific Anatomic Structure

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

Whole Area
(02) Skin - Abrasion
(04) Skin - Contusion
(06) Skin - Laceration
(08) Skin - Avulsion
(10) Amputation
(20) Burn
(30) Crush
(40) Degloving
(50) Injury - NFS
(90) Trauma, other than mechanical

Head - LOC
(02) Length of LOC

(04) Level
(06) of
(08) Consciousness

(10) Concussion

Spine
(02) Cervical
(04) Thoracic
(06) Lumbar

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

(1) Minor Injury
(2) Moderate Injury
(3) Serious Injury
(4) Severe Injury
(5) Critical Injury
(6) Maximum (untreatable)
(7) Injured, unknown severity

Aspect

(1) Right
(2) Left
(3) Bilateral
(4) Central
(5) Anterior
(6) Posterior
(7) Superior
(8) Inferior
(9) Unknown
(0) Whole region

SOURCE OF INJURY DATA

OFFICIAL RECORDS
(1) Autopsy records with or without hospital/medical records
(2) Hospital/medical records other than emergency room (e.g., discharge summary)
(3) Emergency room records only (including associated X-rays or other lab reports)
(4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS
(5) Lay coroner report
(6) E.M.S. personnel
(7) Interviewee
(8) Other source (specify):

_____

(9) Police

INJURY SOURCE CONFIDENCE LEVEL

(1) Certain
(2) Probable
(3) Possible
(9) Unknown

DIRECT/INDIRECT INJURY

(1) Direct contact injury
(2) Indirect contact injury
(3) Noncontact injury
(7) Injured, unknown source

INJURY SOURCES

FRONT
(001) Windshield
(002) Mirror
(003) Sunvisor
(004) Steering wheel rim
(005) Steering wheel hub/spoke
(006) Steering wheel (combination of codes 004 and 005)
(007) Steering column, transmission selector lever, other attachment
(008) Cellular telephone or CB radio
(009) Add on equipment (e.g., tape deck, air conditioner)
(010) Left instrument panel and below
(011) Center instrument panel and below
(012) Right instrument panel and below
(013) Glove compartment door
(014) Knee bolster
(015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
(016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
(017) Windshield reinforced by exterior object (specify)

_____

(019) Other front object (specify):

_____

LEFT SIDE
(051) Left side interior surface, excluding hardware or armrests
(052) Left side hardware or armrest
(053) Left A (A1/A2)-pillar
(054) Left B-pillar
(055) Other left pillar (specify):

_____

(056) Left side window glass
(057) Left side window frame
(058) Left side window sill
(059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(060) Other left side object (specify):

_____

RIGHT SIDE
(101) Right side interior surface, excluding hardware or armrests
(102) Right side hardware or armrest
(103) Right A (A1/A2)-pillar
(104) Right B-pillar
(105) Other right pillar (specify):

_____

(106) Right side window glass
(107) Right side window frame
(108) Right side window sill
(109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(110) Other right side object (specify):

_____

INTERIOR
(151) Seat, back support
(152) Belt restraint webbing/buckle
(153) Belt restraint B-pillar or door frame attachment point
(154) Other restraint system component (specify):

_____

(155) Head restraint system
(160) Other occupants (specify):

_____

(161) Interior loose objects
(162) Child safety seat (specify):

_____

(163) Other interior object (specify):

_____

AIR BAG
(170) Air bag-driver side
(171) Air bag-driver side and eyewear
(172) Air bag-driver side and jewelry
(173) Air bag-driver side and object held
(174) Air bag-driver side and object in mouth
(175) Air bag compartment cover-driver side
(176) Air bag compartment cover-driver side and eyewear
(177) Air bag compartment cover-driver side and jewelry
(178) Air bag compartment cover-driver side and object held
(179) Air bag compartment cover-driver side and object in mouth
(180) Air bag-passenger side
(181) Air bag-passenger side and eyewear
(182) Air bag-passenger side and jewelry
(183) Air bag-passenger side and object held
(184) Air bag-passenger side and object in mouth
(185) Air bag compartment cover-passenger side
(186) Air bag compartment cover-passenger side and eyewear
(187) Air bag compartment cover-passenger side and jewelry
(188) Air bag compartment cover-passenger side and object held
(189) Air bag compartment cover-passenger side and object in mouth
(190) Other air bag (specify)

_____

(195) Other air bag compartment cover (specify)

_____

ROOF
(201) Front header
(202) Rear header
(203) Roof left side rail
(204) Roof right side rail
(205) Roof or convertible top

FLOOR
(251) Floor (including toe pan)
(252) Floor or console mounted transmission lever, including console
(253) Parking brake handle
(254) Foot controls including parking brake

REAR
(301) Backlight (rear window)
(302) Backlight storage rack, door, etc.
(303) Other rear object (specify):

_____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT
(401) Hand controls for braking/acceleration
(402) Steering control devices (attached to OEM steering wheel)
(403) Steering knob attached to steering wheel
(405) Replacement steering wheel (i.e., reduced diameter)
(406) Joy stick steering controls
(407) Wheelchair tie-downs
(408) Modification to seat belts, (specify): _____
(409) Additional or relocated switches, (specify):

_____

(410) Raised roof
(411) Wall mounted head rest (used behind wheel chair)
(412) Other adaptive device (specify):_____

_____

EXTERIOR of OCCUPANT'S VEHICLE
(451) Hood
(452) Outside hardware (e.g., outside mirror, antenna)
(453) Other exterior surface or tires (specify):

_____

_____

(454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE
(501) Front bumper
(502) Hood edge
(503) Other front of vehicle (specify):

_____

(504) Hood
(505) Hood ornament
(506) Windshield, roof rail, A-pillar
(507) Side surface
(508) Side mirrors
(509) Other side protrusions (specify):

_____

(510) Rear surface
(511) Undercarriage
(512) Tires and wheels
(513) Other exterior of other motor vehicle (specify): _____

_____

(514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT
(551) Ground
(598) Other vehicle or object (specify):

_____

(599) Unknown vehicle or object

NONCONTACT INJURY
(601) Fire in vehicle
(602) Flying glass
(603) Other noncontact injury source (specify): _____
(604) Air bag exhaust gases
(697) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Restrained?

___ No

___ Yes

Blood Alcohol Level (mg/dl)

BAL = ____

Glasgow Coma Scale Score

GCSS = ____

Units of Blood Given

Units = ____

Arterial Blood Gases

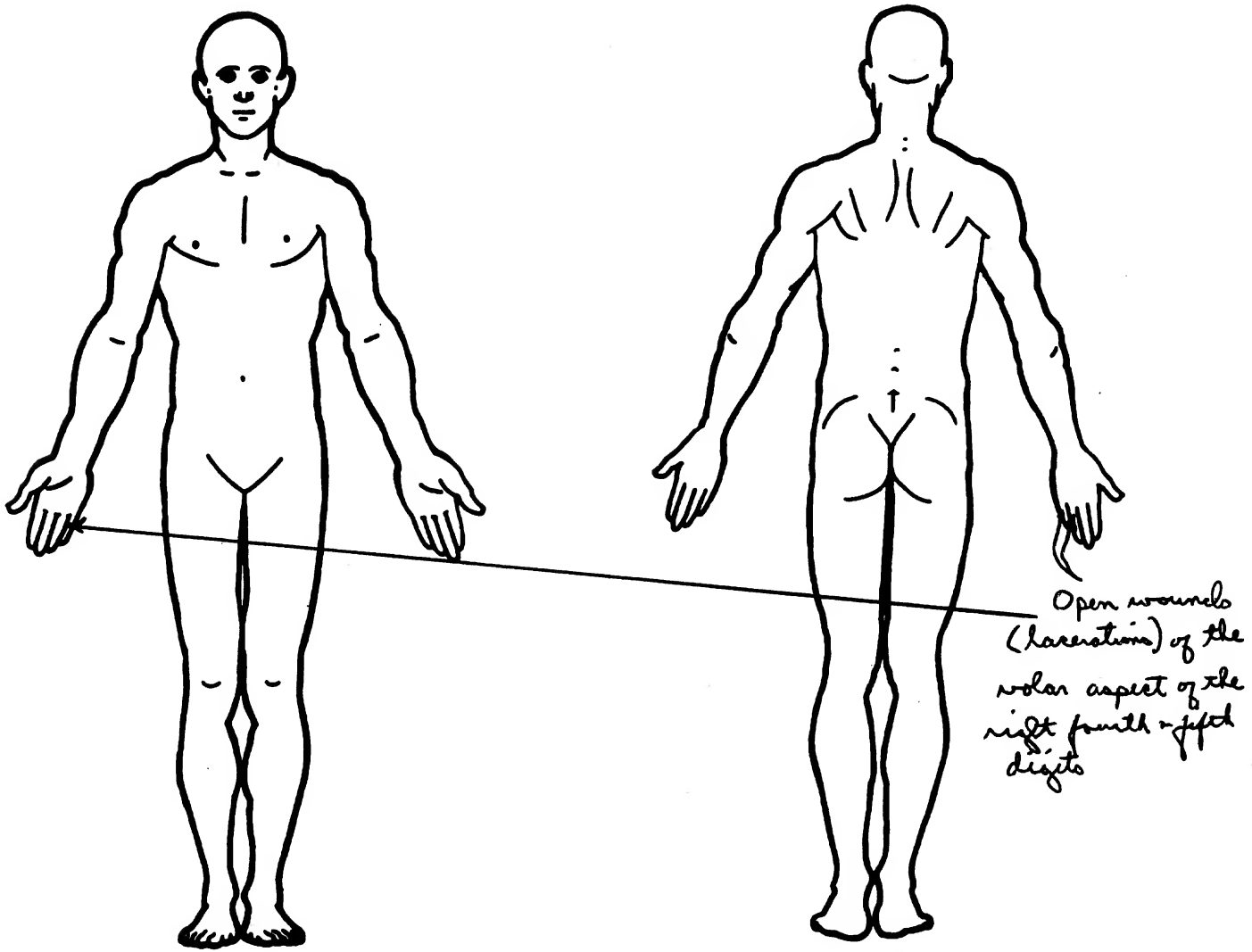
pH = __.__

PO_2 = ____

PCO_2 ____

HCO_3 ____

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



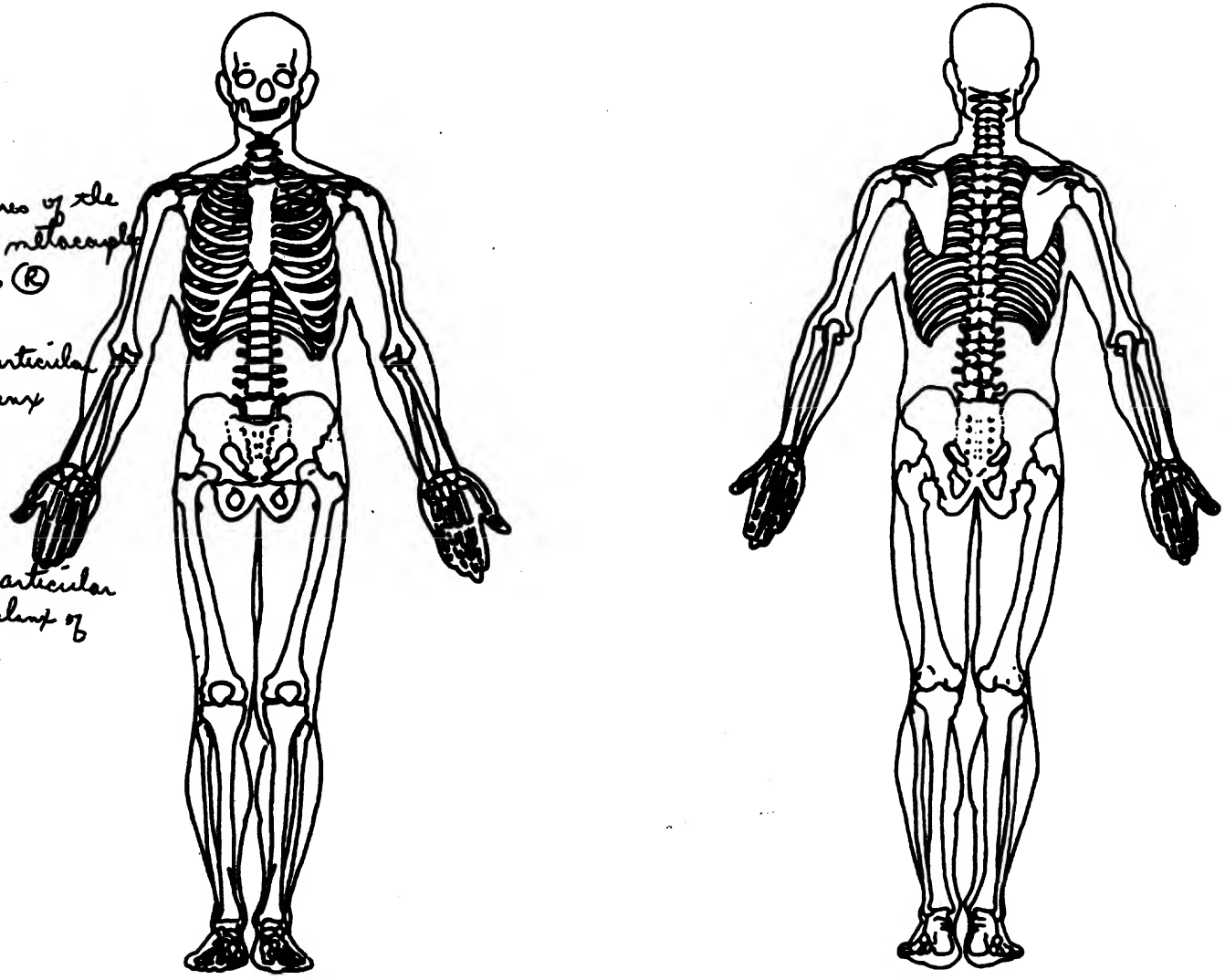
OFFICIAL INJURY DATA — SKELETAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

Comminuted fractures of the distal right 3-5 metacarpals with displacement to Ⓡ

Comminuted intra-articular fx of the mid phalanx of Ⓡ 5th digit

Comminuted intra-articular fx of the distal phalanx of the Ⓡ 4th digit



BEST AVAILABLE

State of Maryland Motor Vehicle Accident Report

[redacted]

REPORT # 1 [redacted]	PAGE OF 2	ACCIDENT DATE 3 [redacted] 94	ACCIDENT TIME 4 1846	REPORT TYPE 5 ☐ FATAL ☒ INJURY ☐ PDO ☐ HIT & RUN ☐ NON-TRAFFIC	RESEARCH 6	LOCAL CASE NUMBER 7 [redacted]	LOCAL CODES 8 [redacted]	PHOTOS T ☒ NO ☐ YES 9	
INVESTIGATING OFFICER ID 10 [redacted]	AGENCY AND AREA 11 [redacted]	SUBMISSION DATE 12 [redacted]	REVIEWER ID # 13	CODE - AND - NAME OF MUNICIPALITY 14 000 [redacted]	COUNTY 15				
RD CHAR [redacted]	RTE NUM Accident Occurred On 17	ROAD NAME 18 [redacted]	IN LANE	TRAF SIG ☒ NO 20 ☐ YES	ON RAMP ☒ NO 21 ☐ YES	0 Ramp Number (Direction) 1 N-W 2 W-N 3 E-N 4 N-E 5 S-E 6 E-S 7 W-S 8 S-W 9 Other 22	IN INTERSECTION ☒ NO 23 ☐ YES		
RD COND [redacted]	INT-RTE 25	INTERSECTING ROAD NAME or Log Mile Reference Manual description 26	MILEPT 27 [redacted]	DIR 28	Dist. of Acc. from INT RTE/Ref. & Dir. 29 ☐ FT ☐ MI S				

RD DIV 30: 01

SRF COND 31: 02

CM ZONE 35: ☒ NO ☐ YES

JUNCTN 36: 03

EVENT 1 37: 01

EVENT 2 38: 01

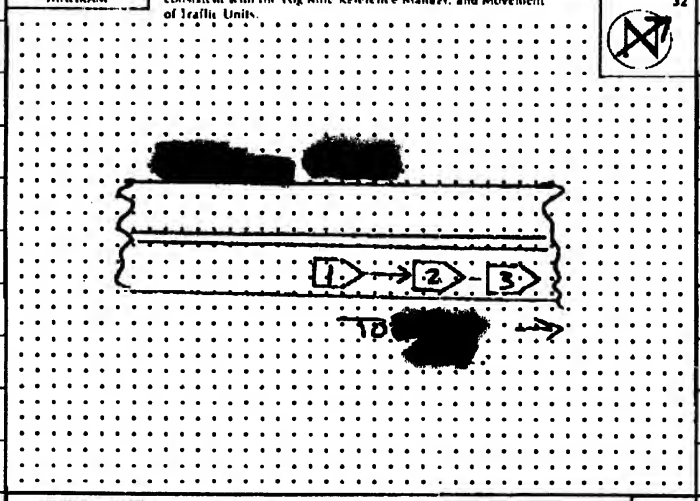
FIX OBJ 39: 00

COLL TY 40: 03

LIGHT 41: 01

WEATHER 42: 01

ACCIDENT DIAGRAM — Show & Label: Roads, Traffic Units, the Travel Direction consistent with the Log Mile Reference Manual, and Movement of Traffic Units. 31 — NORTH: 32



DESCRIBE ACCIDENT briefly; identify units by numbers. Also identify the following: a) the OBJECT DAMAGED & NATURE OF DAMAGE (Property other than vehicles) and b) the NAME & ADDRESS OF OWNER when applicable. 33

VEH #1 FAILED TO REDUCE SPEED AND COLLIDED WITH VEH #2. VEH #2 WAS THEN FORCED INTO VEH #3. VEH #2 HAD STOPPED QUICKLY TO AVOID #3 JUST PRIOR TO THE ACCIDENT.

UNIT # 43: 01

NAME (First, Middle, Last) 44 [redacted] — SEX 45: 01

ADDRESS (No., Street, City, State, Zip) [redacted] CT. — TEL ☐ Work ☐ Res 47 — INJ 48: 02 — EMS 49: A

TYPE OF UNIT 46: ☒ DRIVER ☐ "PED"

MOVEMENT 50	CONDITN 51	SUBST 52	TEST 53	RESULT 54	FOR PEDS ONLY	AGE 55	TYPE 56	LOCATN 57	OBEY 58	VISIBL 59
16	01	01	00	• —		( ) —				

SPEED LIMIT 60	SAF. EQU 61	FQ PROB 62	EJECT 63	CITATION NUMBER (S) 64	FAULT ☐ NO 65 ☒ YES
30	32	01	01	None	

GOING 66: 01

DRIVER'S LICENSE NUMBER [redacted] — STATE 67 [redacted] — CLASS 69

CONTINU 70: 01

DR DATE OF BIRTH 71 [redacted] — IRREGULAR CONDITION 72 ☐ PARKED ☐ HIT & RUN ☐ DRIVERLESS — FIM SPILL 73 ☐ IN ☐ Y — HAZ MAT NUMBER 74 —

BODY TY 75: 02

COMMER VEHICLE ONLY — U.S. DOT NUMBER 76 — ICC NUMBER 77 — BODY TY 78 — CDL? ☐ NO 79 ☐ YES

MOST HE 80: 01

OWNER OR CARRIER NAME (Write "SAME" if Driver) — TEL ☐ Work ☐ Res 81: Oldsmobile Div. of Gm.

CONTRIB CIRCUM STANCES 82-1: 01

OWNER/CARRIER ADDRESS 83 [redacted] — TOWED VEH (S) 84: 00

82-2: 06 — YEAR & MAKE OF VEHICLE 85: 94 Olds — MODEL 86: Windy Eight — 1st IMPACT PT. 87: 01 — MAIN IMPACT 88: 01

82-3: 00 — EXP YR & REGIST # STATE [redacted] — AREAS DAMAGED 90: 01 02 — INSURER 91 [redacted]

82-4: 00 — VEHICLE ID NUMBER 92: 1G3CW52L9R4 [redacted] — POLICY NUMBER [redacted]

DAM EXT 94: 01 — VEHICLE DRIVEN BY 95 [redacted] — VEHICLE REMOVED TO 96: THEIR LOT

UNIT # 43: 02

NAME (First, Middle, Last) 44 [redacted] — SEX 45: 01

ADDRESS (No., Street, City, State, Zip) [redacted] DE. — TEL ☐ Work ☐ Res 47 — INJ 48: 02 — EMS 49: B

TYPE OF UNIT 46: ☒ DRIVER ☐ "PED"

MOVEMENT 50	CONDITN 51	SUBST 52	TEST 53	RESULT 54	FOR PEDS ONLY	AGE 55	TYPE 56	LOCATN 57	OBEY 58	VISIBL 59
06	01	01	00	• —		( ) —				

SPEED LIMIT 60	SAF. EQU 61	FQ PROB 62	EJECT 63	CITATION NUMBER (S) 64	FAULT ☐ NO 65 ☐ YES
30	13	01	01	None	

GOING 66: 01

DRIVER'S LICENSE NUMBER [redacted] — STATE 67 [redacted] — CLASS 69

CONTINU 70: 01

DR DATE OF BIRTH 71 [redacted] — IRREGULAR CONDITION 72 ☐ PARKED ☐ HIT & RUN ☐ DRIVERLESS — FIM SPILL 73 ☐ IN ☐ Y — HAZ MAT NUMBER 74 —

BODY TY 75: 20

COMMER VEHICLE ONLY — U.S. DOT NUMBER 76 — ICC NUMBER 77 — BODY TY 78 — CDL? ☐ NO 79 ☐ YES

MOST HE 80: 01

OWNER OR CARRIER NAME (Write "SAME" if Driver) — TEL ☐ Work ☐ Res 81: Same

CONTRIB CIRCUM STANCES 82-1: 00

OWNER/CARRIER ADDRESS 83: Same — TOWED VEH (S) 84: 00

82-2: 00 — YEAR & MAKE OF VEHICLE 85: 83 Ford — MODEL 86: Ranger — 1st IMPACT PT. 87: 10 — MAIN IMPACT 88: 10

82-3: 00 — EXP YR & REGIST # STATE [redacted] — AREAS DAMAGED [redacted] — INSURER [redacted]

82-4: 00 — VEHICLE ID NUMBER 92: 1FTCR10SXD0 [redacted] — POLICY NUMBER [redacted]

DAM EXT 94: 02 — VEHICLE DRIVEN BY 95 [redacted] — VEHICLE REMOVED TO: THEIR LOT

TRAFFIC UNIT #	SEATING POSITION	CODE all injured & uninjured PASSENGERS below. Use "W" for witness in TRAF UNIT and SEAT columns. WRITE NAME & ADDRESS of Injured Passengers and Witnesses. Witness telephone #.	SEX 100	AGE 101	SAFETY EQUIP 102	EQUIP PROB 103	INJUR SEVER 104	EJEC TION 105	EMS UNIT 106
01	03	[redacted] 99	02	65	32	01	03	01	A
				( )					
				( )					
				( )					
				( )					
				( )					
				( )					

E UNIT MAIS 107 — INJURIES TAKEN BY: [redacted] — INJURIES TAKEN TO 109 — EMS RUN REPORT # 110 — E UNIT MAIS 107 — INJURIES TAKEN BY: [redacted] — INJURIES TAKEN TO 109 — EMS RUN REPORT # 11

MSP FORM #1 (1/93) [redacted]

MSP - CENTRAL RECORDS DIVISION COPY

BEST AVAILABLE

State of [redacted] Motor Vehicle Accident Report

REPORT #	PAGE OF	ACCIDENT DATE	ACCIDENT TIME	REPORT TYPE	RESEARCH	LOCAL CASE NUMBER	LOCAL CODES	PHOTOS
[redacted]	2 2	[redacted] 94	1846	☐ FATAL ☐ INJURY ☐ PDO ☐ HIT & RUN ☐ NON-TRAFFIC		[redacted]	[redacted]	☐ NO ☐ YES

INVESTIGATING OFFICER ID	AGENCY AND AREA	SUPERVISING OFFICER ID	REVIEWER ID #	CODE - AND - NAME OF MUNICIPALITY	COUNTY
[redacted]	[redacted]	[redacted]		[redacted]	[redacted]

RD CHAR	RTE NUM Accident Occurred On	ROAD NAME	IN LANE	TRAF SIG	ON RAMP	Ramp Number (Direction)	IN INTERSECTION
	0			☐ NO ☐ YES	☐ NO ☐ YES	1 N-W 2 W-N 3 I N 4 N E 5 S E 6 E-S 7 W-S 8 S W 9 Other 0 Not Ramp	☐ NO ☐ YES

RD COND	INT-RTE	INTERSECTING ROAD NAME or Log Mile Reference Manual description	MILEPT	DIR	Dist. of Acc. from INT RTE/MT. & Dir.
	0				☐ FT ☐ MI

RD DIV

ACCIDENT DIAGRAM — Show & Label: Roads, Traffic Units, the Travel Direction consistent with the Log Mile Reference Manual, and Movement of Traffic Units.

NORTH

DESCRIBE ACCIDENT briefly, identify units by numbers. Also identify the following: a) the OBJECT DAMAGED & NATURE OF DAMAGE (Property other than Vehicles) and b) the NAME & ADDRESS OF OWNER when applicable

SRF COND

C/M ZONE ☐ NO ☐ YES

JUNCT'N

EVENT-1

EVENT-2

FIX OBJ

COLL TY

LIGHT

WEATHER

00

UNIT # 01

NAME (First, Middle, Last)	SEX	TYPE OF UNIT	ADDRESS (No., Street, City, State, Zip)	INJ	EMS
[redacted]	01	☐ DRIVER ☐ "PED"	[redacted] TEL ☐ Work ☐ Res	01	00

MOVEMENT	CONDITN	SUBST	TEST	RESULT	FOR PEDS ONLY	AGE	TYPE	LOCAT'N	OBEY	VISIBL
06	01	01	00	.		0				

SPEED LIMIT	SAF. EQU	EQ PROB	EJECT	CITATION NUMBER (S)	FAULT
30	13	01	01	None.	☐ NO ☐ YES

GOING	DRIVER'S LICENSE NUMBER	CLASS
01	[redacted]	C

CONTINU	DR DATE OF BIRTH	IRREGULAR CONDITION	HM SPILL	HAZ MAT NUMBER
01	[redacted]	☐ PARKED ☐ CAUGHT FIRE ☐ HIT & RUN ☐ DRIVERLESS	☐ N ☐ Y	

BODY TY	COMMER VEHICLE ONLY	U.S. DOT NUMBER	ICC NUMBER	BODY TY	CDL?
02					☐ NO ☐ YES

MOST HE	OWNER OR CARRIER NAME (Write "SAME" if Driver)	TEL ☐ Work ☐ Res
01	[redacted]	

CONTRIB CIRCUM STANCES	OWNER/CARRIER ADDRESS	TOWED VEH (S)
00	[redacted]	00

82-2	YEAR & MAKE OF VEHICLE	MODEL	1st IMPACT PT.	MAIN IMPACT
00	88 Nissan	Pathfinder	10	10

82-3	EXP YR & REGIST # STATE	AREAS DAMAGED	INSURER
00	[redacted]	10 09	[redacted]

82-4	VEHICLE ID NUMBER	POLICY NUMBER
00	JN8HD16Y1JW[redacted]	

DAM EXT	VEHICLE REMOVED BY	VEHICLE REMOVED TO
02	Driver	DESTINATION

UNIT # 02

NAME (First, Middle, Last)	SEX	TYPE OF UNIT	ADDRESS (No., Street, City, State, Zip)	INJ	EMS
		☐ DRIVER ☐ "PED"	TEL ☐ Work ☐ Res		

MOVEMENT	CONDITN	SUBST	TEST	RESULT	FOR PEDS ONLY	AGE	TYPE	LOCAT'N	OBEY	VISIBL

SPEED LIMIT	SAF. EQU	EQ PROB	EJECT	CITATION NUMBER (S)	FAULT
					☐ NO ☐ YES

GOING	DRIVER'S LICENSE NUMBER	STATE	CLASS

CONTINU	DR DATE OF BIRTH	IRREGULAR CONDITION	HM SPILL	HAZ MAT NUMBER
		☐ PARKED ☐ CAUGHT FIRE ☐ HIT & RUN ☐ DRIVERLESS	☐ N ☐ Y	

BODY TY	COMMER VEHICLE ONLY	U.S. DOT NUMBER	ICC NUMBER	BODY TY	CDL?
					☐ NO ☐ YES

MOST HE	OWNER OR CARRIER NAME (Write "SAME" if Driver)	TEL ☐ Work ☐ Res

CONTRIB CIRCUM STANCES	OWNER/CARRIER ADDRESS	TOWED VEH (S)

82-2	YEAR & MAKE OF VEHICLE	MODEL	1st IMPACT PT.	MAIN IMPACT

82-3	EXP YR & REGIST # STATE	AREAS DAMAGED	INSURER

82-4	VEHICLE ID NUMBER	POLICY NUMBER

DAM EXT	VEHICLE REMOVED BY	VEHICLE REMOVED TO

TRAFF UNIT #	SEATING POSITION	CODE all injured & uninjured PASSENGERS below. Use "W" for witness in TRAF UNIT and SEAT columns. WRITE NAME & ADDRESS of Injured Passengers and Witnesses. Witness telephone #.	SEX	AGE	SAFETY EQUIP	EQUIP PROB	INJUR SEVER	EJEC-TION	EMS UNI
97	98	99	100	101	102	103	104	105	10
				0					
				0					
				0					
				0					
				0					
				0					

00

T UNIT M A S 107	INJURED TAKEN BY:	108	INJURED TAKEN TO:	109	EMS RUN REPORT #	110
T UNIT M B S 107	INJURED TAKEN BY:	108	INJURED TAKEN TO:	109	EMS RUN REPORT #	110

MSP FORM #1 (1/93)

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